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**Better Living with Illness:**

**Transdiagnostic Approaches to  
Psychological Interventions for People  
with Chronic Illness**



**THE UNIVERSITY  
*of* EDINBURGH**

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**Doctorate in Clinical Psychology  
The University of Edinburgh  
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## **Research Portfolio Abstract**

*Objective:* Chronic physical health problems are on the rise. Psychological interventions can play a role in helping people cope with the challenges that long term physical conditions brings. This thesis systematically reviewed the literature for group psychological interventions. Following this, an Acceptance and Commitment Therapy group intervention for people living with a range of long term physical conditions was designed and evaluated.

*Methods:* Key databases were searched for relevant randomized-controlled studies. Papers that met inclusion criteria were quality assessed, and a meta-analysis was conducted. Participants with chronic physical health conditions were invited to an Acceptance and Commitment Therapy group (n=53). Measures were completed at assessment, pre, post and 3-month follow-up. These assessed anxiety and depression symptoms, health perceptions, values-based living and psychological flexibility. Assessment to pre-intervention served as a within-participant control.

*Results:* 22 relevant studies were retrieved, with 18 rated as acceptable or high quality and 14 included in a meta-analysis. The majority of studies reported interventions as efficacious at reducing mental health problems, though effect sizes were weaker when compared to active controls such as education. In the Acceptance and Commitment therapy group, depression and anxiety symptoms reduced significantly from pre to post, compared to control period.

*Conclusions:* Group psychological interventions may be beneficial for people with physical health problems. In particular, group-based ACT interventions may be effective with this population and can be delivered transdiagnostically for a range of physical conditions.



## **Journal Article 1**

### **A Systematic Review of Group Psychological Therapy for People with Chronic Physical Illness**

**Word count: 5020**

Under review in *Journal of Behavioral Medicine*

# **A Systematic Review of Group Psychological Therapy for People with Chronic Physical Illness**

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Running title: Group psychological therapy and physical illness.

## **Abstract**

*Objectives:* The prevalence of long term physical health problems is rising and they are associated with an increased risk of mental health difficulties. This article reviews the efficacy of group psychological interventions for people with chronic physical health problems and co-morbid mental health difficulties.

*Methods:* Embase, Medline, CINAHL and PsycINFO were searched for relevant randomized-controlled studies using search terms to cover long term physical conditions, mental health problems and psychological group interventions. Papers that met inclusion criteria were assessed for quality, and extracted data was subject to meta-analysis where possible.

*Results:* 22 studies from an initial 1910 met inclusion criteria for this review, with 18 rated as acceptable or high quality. 14 of these were included in a meta-analysis. The majority of studies reported interventions as efficacious at reducing mental health problems, though effect sizes were weaker when compared to active controls such as education. This suggests that some of the effects of the intervention may be due to non-specific aspects of the groups, such as group support.

*Conclusions:* This review is broadly in line with previous evidence, highlighting that group psychological approaches are an efficacious intervention for people with physical health problems. Future research should include a wider range of psychological interventions and would benefit from a focus on which components of interventions are key to positive outcomes in this population.

**Keywords**

Chronic illness

Psychological

Group

Cognitive-Behavioural Therapy

Systematic review

## **Introduction**

Living with a physical health problem more than doubles the risk of a mental health problem (Egede, 2007; Ormel *et al.*, 2007), with at least a third of people living with medical problems also affected by diagnosable mental health problems, such as anxiety or depression (Cimpean and Drake, 2011; Department of Health, 2011). These findings are consistent across a number of the most prevalent physical health problems, such as chronic pain (Poole *et al.*, 2009), cardiovascular disease (Gunn *et al.*, 2012), diabetes (Katon *et al.*, 2005), arthritis (Katz and Yelin, 1993), asthma (Opolski and Wilson, 2005) and stroke (Hornsten *et al.*, 2013). The risk of receiving a mental health diagnosis increases further for those that have two or more chronic physical conditions (Moussavi *et al.*, 2007).

Having co-morbid physical and mental health conditions affects people in many ways. Quality of life can be impacted (Lim *et al.*, 2012), daily living activities become more difficult as disability increases (Molosankwe, 2012), and many experience an associated loss of independence and a reliance on others (Osborn & Smith, 1998). As well as these functional effects, mental health problems have a bidirectional association with poorer physical health outcomes (Whooley *et al.*, 2008) and an increased risk of mortality (Blumenthal *et al.*, 2003), suggesting that psychological wellbeing may impact existing physical health problems.

Clearly, the potential benefits from psychological interventions for people with physical health conditions could be considerable and wide-ranging. Although there is some evidence for the role of medications such as antidepressants (Rayner *et al.*,

2010), some people with chronic illness may value psychological therapy over medication (Löwe et. al, 2006). One option that could be relevant for this population is group psychological therapy. For many, illness is an isolating experience, and the shared experience of being with others who have similar problems in a group, a concept Yalom (2005) referred to as 'universality', could be helpful. The loss of functioning and change in role that often accompanies illness as people become care receivers (Molosankwe, 2012) can also be addressed in a group setting by offering the opportunity for alternative roles, such as offering support to others, which Yalom referred to as 'altruism'. Yalom's 'instillation of hope' is also an important factor whereby hearing how others cope with their illness can be a powerful and reinforcing mechanism of change (Yalom, 2005).

Although not conclusive, it is possible that group interventions are as efficacious and efficient as individual therapy (Burlingame, Kapetanovic and Ross, 2005; Burlingame, Mackenzie and Strauss, 2004) and may have effects over an individual approach (Piper *et al.*, 1996). Possible cost benefits from delivering services through groups is also attractive (Tucker and Oei, 2007), particularly in the context of economic constraints (Naylor *et al.*, 2012) and managing waiting lists (Oei and Dingle, 2008). Group interventions vary, from psychotherapy groups where highly specialist professionals focus on interpretation of the dynamic interactions between group members, to psychoeducational groups that involve didactic teaching and skills practice. Many groups blend these approaches, focusing on skill development while using analysis of group interactions to support this. Psychoeducational and 'blended' groups are widely used across many health care settings, as their structured approach

based on manuals and protocols is more easily disseminated. The focus of this review is therefore on these types of interventions.

Many reviews have supported psychological therapy as a treatment option for people with a specific physical condition and mental health comorbidities (e.g. Steed *et al.*, 2003; Linden *et al.*, 2007; Rizzo *et al.*, 2011) and as such, this is recommended by the National Institute of Clinical Excellence (NICE, 2010). Although these reviews have included group as well as individual interventions, they tend to focus on a single health condition or mental health comorbidity. Whilst helpful in facilitating gold-standard methodological designs, this approach can mean that there are limited or no guidelines for less common physical conditions, such as Crohn's disease and Sjogren's syndrome, and the growing population of people living with multiple chronic conditions (Fortin and van den Akker, 2007). Similarly, studies that focus on single mental health diagnoses neglect half of all common mental health diagnoses in the UK which typically involve co-morbid anxiety and depression (Das-Munshi *et al.*, 2008). Diagnosis-specific reviews and interventions have also been criticised as difficult to generalise to psychological services where it is common to accept referrals for a range of physical and mental health diagnoses (McManus *et al.*, 2010; Taylor & Clark, 2009).

This review therefore aimed to address this gap by asking whether group psychological interventions are efficacious at treating mental health problems such as anxiety or depression in people with chronic physical illness when compared to a control group.

## **Method**

Guidance produced by the Centre for Reviews and Dissemination ([http://www.york.ac.uk/inst/crd/index\\_guidance.htm](http://www.york.ac.uk/inst/crd/index_guidance.htm)) and the Cochrane Collaboration (<http://www.cochrane.org/training/cochrane-handbook>) were used in conducting this systematic review.

### **Inclusion / Exclusion criteria**

#### *Participants*

Studies where participants were adults (aged 18+) and had a long term physical health condition with co-morbid mental health difficulties, such as depression or anxiety, met criteria for inclusion in this review. Presence of mental health problems as determined by the use of validated measures, such as the Symptom Checklist 90 - Revised (SCL-90-R; Derogatis and Unger, 2010) or Hospital Anxiety and Depression Scale (HADS; Zigmund and Snaith, 1983) was required for a study to be included. Where a study did not specifically recruit patients with a mental health problem, baseline data were required to be above the clinical threshold for a relevant measure (Table 1). Studies that used measures without validated cut-off scores were not considered to meet criteria for inclusion in this review as it would not be possible to establish presence of co-morbid mental health difficulties. Where multiple measures for a study met inclusion criteria for the present review, all such measures were included to assess the spectrum of mental health problems.



**Table 1: Cut-off scores used to indicate mental health problem at baseline**

Measure	Score	Reported samples with established reliability
Hospital Anxiety and Depression Scale	8	Primary care, Cancer, Stroke and Psychiatric (Bjelland <i>et al.</i> , 2002)
Symptom Checklist Revised (Global severity index)	90 - 0.57	Stroke (Aben <i>et al.</i> , 2002) Chronic Pain (Hardt, Gerbershagen & Franke, 2000)
Problem Areas in Diabetes Scale	40	Diabetes (Welch, Jacobson & Polonsky, 1997)
Hamilton Anxiety Scale	18	Parkinson's Disease (Leentjens <i>et al.</i> , 2011) Stroke (Aben <i>et al.</i> , 2002)
Centre for Epidemiological Studies - Depression Scale	16	Cancer (Hann, Winter & Jacobsen, 1999) Chronic Pain (Geisser, Roth & Robinson, 1997) Arthritis (Blalock <i>et al.</i> , 1989)
Beck Depression Inventory	10	Chronic Pain (Geisser, Roth & Robinson, 1997) Psychiatric (Beck, Steer & Garbin, 1988)
Beck Depression Inventory-II	14	Medical Outpatients (Grothe <i>et al.</i> , 2005) Primary Care Medical (Arnau <i>et al.</i> , 2001)
Beck Anxiety Inventory	8	Psychiatric (Beck <i>et al.</i> , 1988) Parkinson's Disease (Leentjens <i>et al.</i> , 2011)
General Health Questionnaire - 28	22	Older Psychiatric (Wetherell & Arean, 1997)
State-Trait Anxiety Inventory	30	Anxiety Disorders (Kabacoff <i>et al.</i> , 1997) Psychiatric (Okun <i>et al.</i> , 1996; Bieling, Antony & Swinson, 1998)
Geriatric Depression Scale	10	Psychiatric (Leshner <i>et al.</i> , 1994) Parkinson's Disease (Weintraub <i>et al.</i> , 2006)

Physical conditions were considered to meet criteria for inclusion where they met the definition of LTC as outlined by the UK Department of Health (2012): those that “cannot, at present, be cured but is controlled by medication and/or other treatment/therapies”. Search terms were based on a previous Cochrane study (Raynor *et al.*, 2010) and included general terms for chronic illness, as well as specific terms

covering asthma, respiratory diseases, cardiac disease, diabetes, neurological diseases, renal diseases, immunological diseases, rheumatoid arthritis, bowel diseases, chronic pain and tinnitus. A number of conditions were excluded as they do not require self-management of physical symptoms (infertility conditions, antenatal or postnatal depression, and sexual dysfunction) or where the condition is a behavioural risk factor for illness (e.g. obesity). Studies which examined interventions for late-stage terminal conditions, cognitive disease (such as dementia) or brain injury were excluded as the needs of these patients differ and require substantive care or rehabilitation. Studies evaluating interventions for cancer patients were also excluded as the focus is often on curing disease, rather than management of symptoms, and difficulties identifying whether the study includes acute or chronic presentations (WHO, 2008).

### *Interventions*

Group psychological interventions were included in this review. Those that were purely supportive (i.e. did not actively intend to influence cognitions, affect or behaviour), targeted at staff or family rather than patients, or involved only a component of a psychological therapy (e.g. relaxation therapy, music or dance therapy, yoga) were excluded. Interventions that included significant non-psychological content were also excluded, unless this was controlled for in the study. Studies that focused on specific medical procedures or where the delivery channel was not face-to-face were excluded. Studies were also excluded if they involved two or more individual sessions to allow the group effect to be isolated, as well as those that targeted health behaviour change, or focused on coping with bereavement trauma.

### *Outcomes*

Studies with one or more validated mental health outcome measures were eligible for inclusion, either as primary or secondary outcome measures. A minimum follow up period of six months was also required for inclusion.

### *Study Design*

Only controlled trials that used randomised or quasi-randomised methodologies were eligible for inclusion. Studies with additional variables, such as telephone support, multiagency interventions, pharmacological interventions, and biomedical interventions aimed at the physical health condition, were excluded, unless these were included as an active control. Only studies published post-CONSORT (1996; Begg *et al.*, 1996) were included, to ensure quality of trial reporting.

### **Search strategy**

Search results were limited to English language only, due to cost, timescales and practicalities of translation of texts. An initial feasibility search was conducted in February 2013. Following this, the Cochrane Database of Abstract of Reviews of Effects (DARE) was searched for existing reviews. The search terms (depress\* OR anxiety) were used along with general terms for long term physical health conditions (long term condition OR chronic illness OR chronic disease OR chronic physical). Specific conditions were not searched since this process was to establish whether a review covering a range of conditions was available.

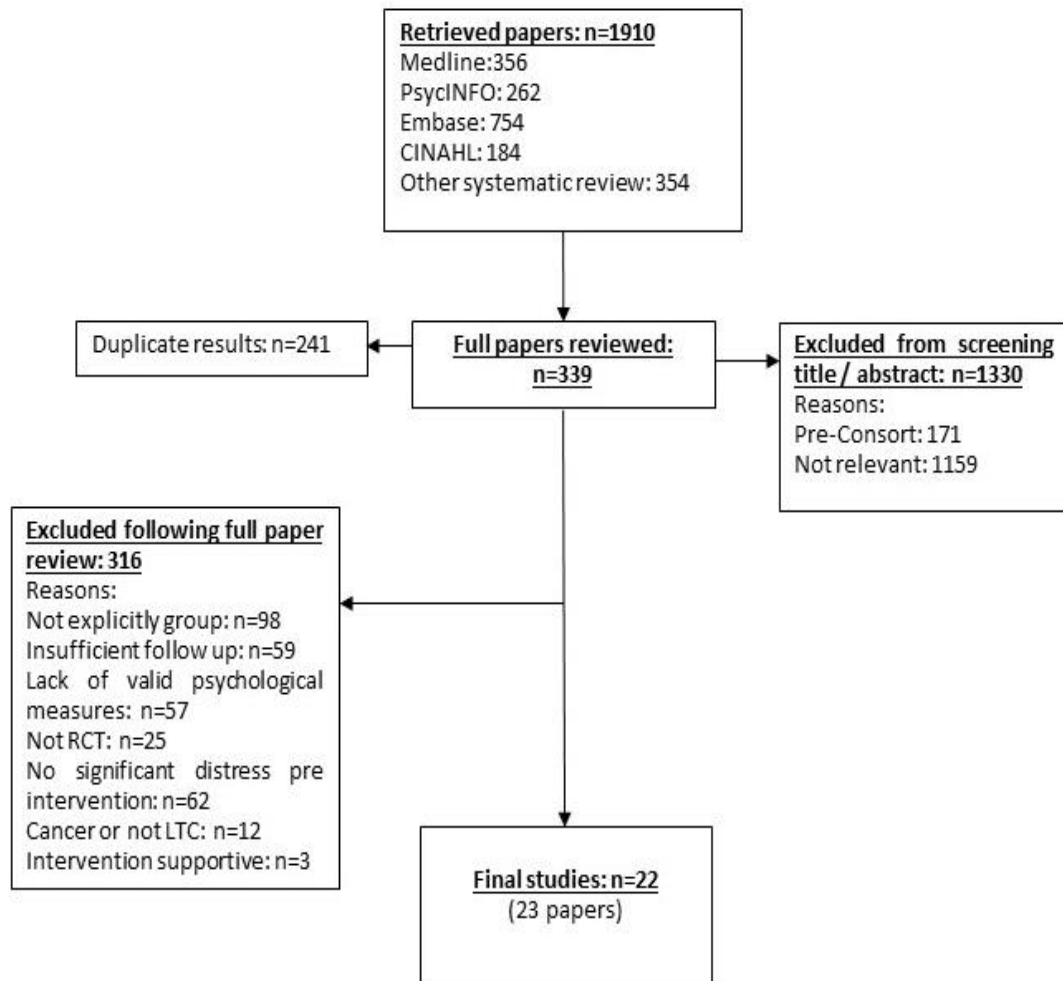
This search indicated a number of reviews of interest. The majority of the reviews, however, focused on a specific health condition, such as COPD (Baraniak & Sheffield, 2011) or Parkinson's disease (Klaassen *et al.*, 1995). Reviews that focus on a single diagnosis are likely to exclude many health conditions and may not capture the full range of evidence-based psychological interventions available to clinicians. Two further papers considered evidence for psychological interventions across a range of physical health conditions (van Straten *et al.*, 2010; Rizzo *et al.*, 2011). These reviews focussed on depression diagnoses, rather than a broader definition of mental health problems. In addition, both reviews were conducted in 2008, and therefore do not include research that has arisen as a result of the recent focus on improving mental health care for people with long term physical conditions (e.g. Department of Health, 2011). Recent guidance from the National Institute of Clinical Excellence was also reviewed. This yielded a review for the treatment of depression in adults with chronic physical health conditions, but the focus was on quality of life and physical health improvements, rather than reduction of symptoms of mental health (Fekete, Antoni, & Schneiderman, 2007). No reviews were identified with a focus on group interventions for people with chronic illness and comorbid mental health difficulties.

Following this, key electronic databases were searched for relevant studies in May 2013: Embase; Medline, CINAHL; and PsycINFO, using limits for English language, human participants, adults and randomised controlled trials. The string that was used to search titles, abstracts and keywords contained the following terms, using subject headings where possible in addition to the string:

('chronic disease' OR 'medical\* ill\*' OR 'physical\* ill\*' OR 'asthma' OR 'pulmonary disease' OR 'chronic obstructive' OR 'COPD' OR 'diabet\*' OR 'parkinson\*' OR 'myocardial' OR 'ischemic' OR 'ischaemic' OR 'stroke' OR 'cerebral ischemia' OR 'epilep\*' OR 'myoclonic epilepsies' OR 'ulcer\*' OR 'renal' OR 'chronic kidney failure' OR 'hiv\*' OR 'human immunodeficiency virus' OR 'multiple sclerosis' OR 'rheumat\*' OR 'arthritis' OR 'angina' OR 'cardio\*' OR 'myocardial diseases' OR 'neuro\*' OR 'ileo\*' OR 'crohn disease' OR 'stoma\*' OR 'irritable bowel' OR 'chronic fatigue' OR 'chronic pain' OR 'tinnitus' OR 'fibromyalgia') AND ('mental health' OR 'depressi\*' OR 'anxiety' OR 'psych\*' OR 'panic' OR 'stress') AND ('psychotherap\*' OR 'behaviour therap\*' OR 'behavior therapy' OR 'cognitive therap\*' OR 'interpersonal \*therap\*' OR 'acceptance and commitment therap\*') AND ('randomized controlled trial' OR 'clinical trial' OR 'placebo' OR 'treatment effectiveness evaluation' OR 'random\*' OR 'evaluat\* stud\*' OR 'evaluation research' OR 'prospectiv\* stud\*' OR 'prospective study') AND ('group').

### **Data extraction**

Data was extracted from each study using a form which covered information on study participants (including recruitment method and demographic information), intervention (including its components, format, therapist training and duration) and outcome data (including the mean, standard deviation and number of participants in each treatment condition for pre, post and follow-up time points) (Appendix 1). All studies reporting post-treatment data were considered for inclusion in a meta-analysis. Study authors were contacted and requested to provide post-treatment data where this was not available.



**Figure 1: Flowchart describing the literature search**

### Quality assessment

Guidance from the Scottish Intercollegiate Guidance Network (SIGN) and Cochrane Collaboration was used to develop a set of twelve quality indicators a priori, along with an overall rating of bias for the study (Appendix 2). A further three criteria were included to assess treatment quality, which it has been suggested is associated with outcome (Yates *et al.*, 2005). Together, these criteria broadly represent the five areas of bias recommend in Cochrane guidelines for conducting systematic reviews:

selection bias, performance bias, detection bias, attrition bias and reporting bias (Higgins and Green, 2011). It has been suggested that the use of detailed scales in reviews is unreliable and lacks transparency (Jüni, 1999), and are more likely to lead to ratings of the reporting of the study rather than its conduct (Higgins and Green, 2011). As such, each indicator was rated as either 'Yes', 'No', 'Not applicable' or 'Not reported' for all included studies. Each study was also rated in terms of its overall risk of bias, as either 'High quality' (low risk of bias), 'Acceptable' (some risk of bias) or 'Unacceptable' (high risk of bias).

For the purpose of this review, a form was developed to capture these ratings for each study (Appendix 2). Two additional reviewers (N.B.F. and D.G.) also used this form to independently rate five randomly selected studies from the sample. Inter-rater reliability was calculated, Kappa = 0.911 ( $p < 0.01$ ), suggesting strong reliability across raters (Landis & Koch, 1977). Disagreements between reviewers were resolved by discussion.

### **Meta-analysis**

In order to investigate the efficacy of group psychological interventions for treatment of mental health problems with comorbid chronic illness populations, a meta-analysis of the data was also conducted. Studies were grouped according to intervention type (e.g. cognitive/behavioural) and whether they used an inactive control (such as standard care), an active control (such as education) or a treatment control (such as another intervention). Only studies rated as 'acceptable' or 'high' quality were included in the meta-analysis. Study authors were contacted for necessary data where

this was not available in the paper. Effect sizes were calculated using Hedge's *g* to reduce any bias from inclusion of a range of sample sizes. Where data was not available for this, Cohen's *d* was calculated (Dunst *et al.*, 2004; see Table 2). Pooled effect sizes were obtained by calculating the mean effect size for the group. Where studies reported effect sizes for more than one relevant measure, all effect sizes were included, to minimise bias to any one mental health outcome measure. Some studies included both inactive control and active control groups, and so were included in both meta-analyses.

## **Results**

### **Search results**

A total sample of 1910 studies were retrieved (Figure 1). All papers were screened by title for relevance to the review. Reasons for excluding titles included studies that used medical interventions, those that did not include chronic illness, those that were not an intervention study, studies that took place pre-CONSORT or studies that did not focus on mental health (e.g. smoking cessation). Relevant systematic reviews retrieved in this search, or the earlier DARE search, were examined for studies meeting criteria for inclusion.

### **Study characteristics**

Study characteristics for the 22 included studies are summarised in Table 2. Seven of the studies focussed on patients with HIV/AIDS, with a further four targeting chronic pain conditions. The remaining studies represented a broad range of health problems.



One of these studies included two sub groups, one of which was arthritis, and the other cancer. Only data for the arthritis sub-group was included in this review, in accordance with exclusion criteria. One study took a trans-diagnostic approach and included a range of long term health conditions. A wide range of measures were used, with eight using standardised measures of both depression and anxiety. Four reported a composite mental health measure and ten used a measure of depression, but not anxiety. None of the studies used anxiety measures alone.

### **Study quality**

Table 3 presents ratings of quality for the 22 studies, ordered by risk of bias, from lowest to highest. Overall ratings of 'High quality' were given to ten of the studies, with 'Acceptable' being used to describe a further eight. Four studies were rated as 'Unacceptable' indicating a high risk of bias. These studies did not describe the strategy used to randomise participants and reporting of therapist training or supervision was lacking, making it difficult to assess the quality of the intervention. Appropriate treatment supervision was reported in less than half of the studies (n=10) while intention to treat analysis was described adequately in almost all of the 'High quality' studies (n=9), and in 15 of the studies overall. Twelve of the studies used active controls such as education, nine studies compared interventions to inactive controls (such as standard care or waiting lists) and one used a treatment comparison. Four studies also included a third comparison condition. The commentary below includes only those studies rated as 'acceptable' or 'high' quality.

Considering the studies that recruited participants with HIV or AIDS, most used either Cognitive Behavioural Stress Management (CBSM) or coping based interventions and reported significant intervention effects (Antoni *et al.*, 2006; Berger *et al.*, 2008; Heckman *et al.*, 2007; Laperriere *et al.*, 2005), with one study finding no effect for the intervention (Chesney *et al.*, 2003). One further study compared Existential Psychotherapy to an educational control, but found improvements in both conditions (Weiss *et al.*, 2003).

Three studies evaluated a range of interventions for chronic pain conditions. One examined Cognitive Behaviour Therapy (CBT) for patients with Fibromyalgia and found a significant treatment effect (Castel *et al.*, 2012). A further study evaluated Behaviour Therapy for participants with Fibromyalgia and found no intervention effect (Nicassio *et al.*, 1997). One study recruited patients with chronic pain and compared CBT to Acceptance and Commitment Therapy, a third-wave CBT intervention with increasing evidence for its use with a range of physical health co-morbidities (Wetherell *et al.*, 2011). The authors reported both interventions reduced symptoms of depression. One further study evaluated CBT for patients with Rheumatoid Arthritis, but found no treatment effect (Herschback *et al.*, 2010).

Respiratory conditions were the focus of two studies. Hynninen and colleagues (2010) found CBT was superior to treatment as usual for patients with COPD. However, Kunik and colleagues (2008) reported no intervention effect in comparison to an education control group with equivalent therapist contact for patients with COPD.

One study recruited patients with Multiple Sclerosis and evaluated a CBT intervention with this population, reporting significant improvements in the treatment group (Forman *et al.*, 2010). A further two studies focussed on patients with Tinnitus. Robinson and colleagues (2008) evaluated CBT and reported significant improvements following treatment. However, Kroner-Herwig and colleagues (2003) reported no difference between Tinnitus Coping Training and an educational control group.

Patients with kidney disease were the participants in one evaluation that found support for group CBT over emotional support (Duarte *et al.*, 2009). However, Snoek and colleagues (2008) found no difference between CBT and an educational support group for patients with diabetes. Similarly, Merswolken and colleagues (2010) found no treatment effect for CBT for cardiac problems.

The range of interventions used across all of the health conditions was varied. Nine out of 18 of the studies rated as 'acceptable' or 'high' quality evaluated CBT interventions. Almost all of these (n=8) reported using a manual and gave a clear rationale for treatment. However, more than half did not clearly report appropriate training and supervision for therapists (n=5; Castel *et al.*, 2012; Forman *et al.*, 2012; Kunik *et al.*, 2008; Snoek *et al.*, 2008; Merswolken *et al.*, 2010). Five of the CBT studies reported that the intervention was superior to controls. However, four of these studies used non-active controls with no therapist contact (Castel *et al.*, 2012; Forman *et al.*, 2010; Hynninen *et al.*, 2010; Robinson *et al.*, 2008). Only one study that compared CBT to an active control found a treatment effect (Duarte and colleagues,

2009). Three further studies reported no significant improvements for CBT interventions when compared to an active control with equivalent contact time (Herschback *et al.*, 2010; Kunik *et al.*, 2008; Snoek *et al.*, 2008) with one study reporting no significant difference between CBT and a no treatment group (Merswolken *et al.*, 2010).

Three further studies reported evaluations of Cognitive Behavioural Stress Management (CBSM), an adjunctive form of CBT. One of these compared CBSM to a control group with equivalent therapist contact and found CBSM was superior (Antoni *et al.*, 2006). The remaining two studies also found favourable results for CBSM in comparison to standard care with no therapist contact (Berger *et al.*, 2008), and an educational control with no therapist contact (Laperriere *et al.*, 2005).

The study by Wetherell and colleagues (2011), the methodologically strongest in this review, reported an evaluation of an Acceptance and Commitment Therapy (ACT) intervention. This study, rated as 'High quality', compared ACT to CBT and found significant improvements in both groups, which were maintained at six-month follow up.

A further three studies examined coping training interventions. One found superior effects for the intervention in comparison to a reduced contact standard care (Heckman *et al.*, 2007). Chesney and colleagues (2003) compared the intervention to an educational control group for which therapist contact time was not reported, and found no intervention effect. One further study also found no effect comparing a coping

intervention to reduced contact educational support (Kroner-Herwig *et al.*, 2003). Two further studies evaluated Existential Psychotherapy (Weiss et al, 2003) and Behaviour Therapy (Nicassio *et al.*, 1997) respectively and found no intervention effects.

**Table 2: Characteristics, effect sizes and findings of studies**

Study Location	Health condition (N)	Recruitment	Mean age (SD)	Intervention arms	Intervention vs control contact (hours)	Follow up (months)	Psychological Outcome measure(s)	Post treatment effect size g (pre) <sup>h</sup>	Follow- up effect size r	Findings
Antoni (2006) North America	HIV (130)	Mixed	41.6 (8.3)	CBSM <sup>+</sup> educational control	vs 22.5 vs 22.5	15	BDI	0.25 (0.09)	0.39	Intervention superior to educational control in improving depressed mood.
Berger (2008) Europe	HIV (77)	Secondary care	44.0 (N/R)	CBSM standard care	vs 24 vs 0	15	HADS	Anx:0.52 (2.12) Dep:0.00 (2.89)	0.25 (anxiety) 0.26 (depn)	CBSM has quality of life and psychological improvements, particularly in individuals distressed at baseline.
Chesney (2003) North America	HIV (149)	Volunteer / advert	39 (7.3)	Coping Effectiveness Training vs education control vs wait list	15 vs N/R	12	STAI; CES-D	STAI: 0.15 (0.23) CES-D: 0.03 (0.23)	STAI: 0.07 CES-D: 0.03	Coping skills training did not reduce depressive symptoms more than wait list control but was superior to wait list for anxiety symptom reduction. Intervention not superior to education control.

<sup>h</sup> Hedge's g, between-groups effect size

<sup>+</sup> Cognitive Behavioural Stress Management

\* Not estimable

Study Location	Health condition (N)	Recruitment	Mean age (SD)	Intervention arms	Intervention vs control contact (hours)	Follow up (months)	Psychological Outcome measure(s)	Post treatment effect size g (pre) <sup>h</sup>	Follow-up effect size r	Findings
Hansen (2006) North America	AIDS (267)	Mixed	40.1 (7.0)	Coping group vs standard care	18 vs up to 12	12	SCL90-R	0.33 (0.21)	0.13	Coping intervention reduced psychiatric distress more than standard care.
Heckman (2007) North America	HIV / AIDS (295)	Mixed	55.3 (4.8)	Coping group vs Interpersonal support vs Individual therapy on request	18 vs 18 vs N/R	8	Geriatric Depression Scale	0.44 (0.30) vs ITUR 0.09 (0.02) vs IS	0.26 vs ITUR 0.02 vs IS	Both coping intervention and interpersonal support group reduced symptoms of depression more than individual therapy on request.
Laperriere (2005) Europe	HIV / AIDS (154)	Mixed	38 (7)	Cognitive behavioural stress management vs education	20 vs 20	12	BDI	0.26 (0.001)	0.35	Both conditions reduced distress, but intervention superior to control. Changes were maintained at follow up.
Weiss (2003) Europe	HIV (85)	Volunteer advert	38.8 (7.8)	Existential psychotherapy vs education	55 vs N/R	15	BDI	0.09 (0.10)	0.03	Both conditions improved symptoms of depression.

<sup>h</sup> Hedge's g, between-groups effect size

Study Location	Health condition (N)	Recruitment	Mean age (SD)	Intervention arms	Intervention vs control contact (hours)	Follow up (months)	Psychological Outcome measure(s)	Post treatment effect size g (pre) <sup>h</sup>	Follow-up effect size r	Findings
Duarte (2009) South America	Kidney disease (90)	Secondary care	53.2 (14.2)	CBT vs Education plus emotional support	18 vs 6-10	9	BDI	0.79 (0.30)	0.67	Group CBT outperformed in the treatment of depression than emotional support.
Castel (2012) Europe	Fibromy algia (93)	Not reported	49.6 (6.8)	CBT vs CBT plus hypnosis vs standard care	28 vs 28 vs 0	6	HADS (Spanish)	4.77 (0.68) vs standard care	5.84	Hypnosis with CBT was more efficacious at reducing psychological distress than CBT alone, and both were better than treatment as usual.
Nicassio (1997) North America	Fibromy algia (86)	Mixed	53.1 (N/R)	Behavioural therapy vs education	15 vs 15	6	CES-D	0.47 (0.34) <sup>e</sup>	0.38	Both intervention and control groups improved over time, with no significant difference between them.
Vlaeyen (1996) Europe	Fibromy algia (131)	Secondary care	44.0 (9.4)	CBT plus education vs education plus discussion vs wait list	42 vs 42 vs 0	12	BDI	WL: 0.03 (0.36) <sup>e</sup> Ed: 0.26 (0.04)	Ed: 0.14 <sup>c</sup>	No improvements in intervention group on any measure.



Study Location	Health condition (N)	Recruitment	Mean age (SD)	Intervention arms	Intervention vs control contact (hours)	Follow up (months)	Psychological Outcome measure(s)	Post treatment effect size g (pre) <sup>h</sup>	Follow-up effect size r	Findings
Wetherell (2011) <i>North America</i>	Chronic pain	Mixed	54.9 (12.5)	ACT vs CBT	12 vs 12	6	BDI-II	-0.39 (-0.31) <sup>c</sup>	0.14	Both interventions reduced symptoms of pain, depression and pain-related anxiety.
Herschback (2010) <i>Europe</i> *	Rheumatoid Arthritis (523)	Secondary care	46.7 (9.5)	CBT vs Supportive Experiential Therapy vs standard care	6 vs 6 vs N/R	12	HADS (German)	Anx: 0.05 (0.03) Depn: 0.00 (0.00)	Anx: 0.05 Depn: 0.12	No effect for CBT or Supportive Experiential Therapy in arthritis patients. Data for control group not reported
Forman (2010) <i>Europe</i>	Multiple Sclerosis (40)	Secondary care	47.7 (9.7)	CBT vs wait list and standard care	10.5 vs 0	6	HADS; GHQ-12	Anx: 0.62 Depn: 0.20 GHQ: 0.68 <sup>#</sup>	Anx: 0.48 Depn: 0.24 GHQ: 0.75	Group CBT superior to wait list control in reducing symptoms of depression but no effect on anxiety, quality of life or self-efficacy.

<sup>h</sup> Hedge's g, between-groups effect size

<sup>h</sup> Hedge's g (c=calculated), between-groups effect size

<sup>c</sup> Cohen's d

\* Study also reported separate results for cancer, which are not included here

<sup>#</sup> Baseline effect sizes not estimable

Study Location	Health condition (N)	Recruitment	Mean age (SD)	Intervention arms	Intervention vs control contact (hours)	Follow up (months)	Psychological Outcome measure(s)	Post treatment effect size g (pre) <sup>h</sup>	Follow-up effect size r	Findings
Hynninen (2010) Europe	COPD (51)	Mixed	61.0 (8.8)	CBT vs standard care	14 vs 1	6	BDI-II; BAI	BDI: 0.53 (0.02) BAI: 0.69 (0.00)	BDI: 0.84 BAI: 0.93	CBT group reduced symptoms of anxiety and depression compared to the control group.
Kunik (2008) North America	COPD (238)	Mixed	66.3 (10.2)	CBT vs education	8 vs 8	12	BDI-III; BAI	*	BDI: 0.03 BAI: 0.10	Group CBT and group education both improved anxiety and depression symptoms, but no significant difference between the two conditions.
Ross (2005) North America	Asthma (34)	Secondary care	39.0 (11.3)	CBT vs wait list	18 vs 0	6	BDI; Sheehan Patient Rated Anxiety Scale	BDI: 0.52 (0.28) Sheehan: 0.96 (0.42)	BDI: 0.25 Sheehan: 0.29 <sup>†</sup>	Intervention was better than wait list control in reducing panic, anxiety and improving quality of life.

<sup>h</sup> Hedge's g, between-groups effect size

<sup>†</sup> Compared to post control data as follow up control data was not reported.

\* Not estimable

Study Location	Health condition (N)	Recruitment	Mean age (SD)	Intervention arms	Intervention vs control contact (hours)	Follow up (months)	Psychological Outcome measure(s)	Post treatment effect size g (pre) <sup>h</sup>	Follow- up effect size r	Findings
Kroner-Herwig (2003) Europe	Tinnitus (95)	Volunteer / Advert	46.8 (11.5)	Tinnitus coping training vs minimal contact and education vs minimal contact and relaxation vs wait list	17-22 vs 2	12 (NB data not reported for FU)	SCL90-R	WL: 0.20 (0.30) Ed: 0.02 (0.29) Rel: 0.41 (0.99)	*	No change in the psychological variables for any condition.
Robinson (2008) North America	Tinnitus (65)	Secondary care	55.0 (11.2 8)	CBT vs wait list	N/R	12	BDI	*	*	Intervention superior to wait list control for depressive symptoms, but there was no change in tinnitus symptoms
Merswolken (2010) Europe	Cardiac (62)	Secondary care	61.1 (7.9)	CBT vs no treatment	30 vs 0	6	HADS (German)	*	Anx: 0.25 Dep: 0.11	Intervention group reduced anxiety but was not superior to control group. Depression scores did not change in either group.

<sup>h</sup> Hedge's g, between-groups effect size

Study Location	Health condition (N)	Recruitment	Mean age (SD)	Intervention arms	Intervention vs control contact (hours)	Follow up (months)	Psychological Outcome measure(s)	Post treatment effect size g (pre) <sup>h</sup>	Follow- up effect size r	Findings
Snoek (2008) <i>Europe</i> <sup>•</sup>	Diabetes (88)	Secondary care	37.8 (10.6)	CBT education	vs 12 vs 12	12	CES-D	*	0.03	Intervention and educational control group both reduced distress. Changes were not maintained at final follow up.
Rybarczyk (2001) <i>North America</i>	Chronic illness (302)	Primary care	66.1 (9.5)	CBT vs wait list	16 vs 0	12	BAI; CES-D	BAI: 0.36 (0.19) CES-D: 0.38 (0.02)	BAI: 0.20 CES-D: 0.00	Intervention superior to wait list control in reducing anxiety and depression.

<sup>h</sup> Hedge's g, between-groups effect size

<sup>•</sup> Snoek et al (2008) and Van der Ven et al (2005) used the same data and so are combined for the purposes of this review.

<sup>#</sup> Baseline effect sizes not estimable

**Table 3. Quality assessment of studies**

Quality Criteria	The study addresses an appropriate and clearly focused question	The assignment of subjects to treatment groups is randomised.	Subjects and investigators are kept 'blind' about treatment allocation.	The treatment and control groups are similar at the start of the trial.	The only difference between groups is the treatment under investigation.	All relevant outcomes are measured in a standard, valid and reliable way.	% dropped out of study $\leq 20\%$	Intention to treat analysis used	Results are comparable for all sites	Treatment adheres to a manual	Clear rationale for treatment	Therapists appropriately trained and supervised	How well did the study minimise bias?
Wetherell (2011)	+	+	+	+	+	+	+	+	N/A	+	+	+	High quality
Castel (2012)	+	?	+	+	+	+	+	+	N/A	+	+	?	High quality
Duarte (2009)	+	+	+	+	+	+	+	?	?	+	+	+	High quality
Chesney (2003)	+	?	-	+	+	+	+	+	N/A	+	+	+	High quality
Herschbach (2010)	+	+	-	?	+	+	+	+	?	+	+	+	High quality
Kunik (2008)	+	+	+	+	+	+	-	+	N/A	+	+	?	High quality
Hynninen (2010)	+	+	-	-	+	+	+	+	N/A	+	+	+	High quality
Robinson (2008)	+	+	-	+	+	+	-	+	N/A	+	+	+	High quality
Weiss (2003)	+	+	-	-	+	+	+	+	N/A	+	+	+	High quality
Snoek (2008) <sup>13</sup>	+	+	-	-	+	+	+	+	N/A	+	+	-	High quality
Antoni et al (2006)	+	+	+	+	+	+	-	+	N/A	+	+	+	Acceptable
Nicassio (1997)	+	+	-	?	+	+	+	-	N/A	+	+	+	Acceptable
Berger (2008)	+	+	-	+	+	+	-	+	?	+	+	?	Acceptable

<sup>13</sup> Snoek et al (2008) and Van der Van et al (2005) used the same data and so are combined for the purposes of this review.

Quality Criteria	The study addresses an appropriate and clearly focused question	The assignment of subjects to treatment groups is randomised.	Subjects and investigators are kept 'blind' about treatment allocation.	The treatment and control groups are similar at the start of the trial.	The only difference between groups is the treatment under investigation.	All relevant outcomes are measured in a standard, valid and reliable way.	% dropped out of study $\leq 20\%$	Intention to treat analysis used	Results are comparable for all sites	Treatment adheres to a manual	Clear rationale for treatment	Therapists appropriately trained and supervised	How well did the study minimise bias?
Kroner-Herwig	+	+	-	+	+	+	+	-	N/A	+	+	-	Acceptable
Heckman (2007)	+	+	-	+	+	+	-	+	?	+	+	-	Acceptable
Laperriere (2005)	+	?	-	?	+	+	?	+	?	+	+	+	Acceptable
Merswolken (2010)	+	+	-	+	+	+	+	+	?	-	-	-	Acceptable
Forman (2010)	+	+	-	+	+	-	-	?	N/A	+	+	?	Acceptable
Hansen (2006)	+	?	-	+	+	-	+	+	+	+	+	-	Unacceptable
Rybarczyk (2001)	+	?	-	-	+	+	+	-	N/A	+	+	-	Unacceptable
Vlaeyen (1996)	+	-	-	+	-	+	+	-	N/A	-	+	?	Unacceptable
Ross (2005)	+	?	-	+	-	-	-	-	N/A	+	+	?	Unacceptable

**Key:**

+	Yes
-	No
?	Not reported
N/A	Not applicable

## **Meta-analysis**

Fourteen studies were included in the meta-analysis. Three studies did not report sufficient data for meta-analysis purposes, and did not provide this on contact, resulting in the studies being excluded from meta-analysis (Merwsolken *et al.*, 2008; Snoek *et al.*, 2008; Robinson *et al.*, 2008). One study did provide details on contact and was included (Berger *et al.*, 2008). Four further studies were excluded due to being rated as having “unacceptable” quality (Vlaeyen *et al.*, 1996; Hansen *et al.*, 2006; Rybarczyk *et al.*, 2001; Ross *et al.*, 2005). Of the remaining fifteen studies, all but one were based on forms of cognitive-behavioural or behavioural psychological therapies. The one exception utilised existential psychotherapy, a therapy considerably different to this model (Weiss *et al.*, 2003). As such, this study was excluded from the meta-analysis, as pooling its effects was not considered meaningful due to this difference.

### *Inactive control groups*

The meta-analysis for the inactive control studies included six studies (467 participants; Castel *et al.*, 2012; Kroner *et al.*, 2003; Heckman *et al.*, 2007; Hynninen *et al.*, 2010; Forman *et al.*, 2010; Berger *et al.*, 2008). One study reported two mental health measures (Hynninen *et al.*, 2010; Berger *et al.*, 2008), and another reported three outcome measures (Forman *et al.*, 2010). The mean effect size from these 10 outcomes was 0.85, giving an indication of strong support for the efficacy of group psychological interventions for people living with long term health conditions. However, removing an outlier from this calculation ( $g=4.77$ ; Castel *et al.*, 2012) reduced the mean effect size to 0.43. The mean effect size at follow up for the 4

studies reporting follow-up data for 7 measures was 1.33 (Heckman *et al.*, 2007; Castel *et al.*, 2012; Forman *et al.*, 2010; Hynninen *et al.*, 2010). After removing outlying data from Castel *et al.* (2012), this effect reduced to 0.58.

#### *Active control groups*

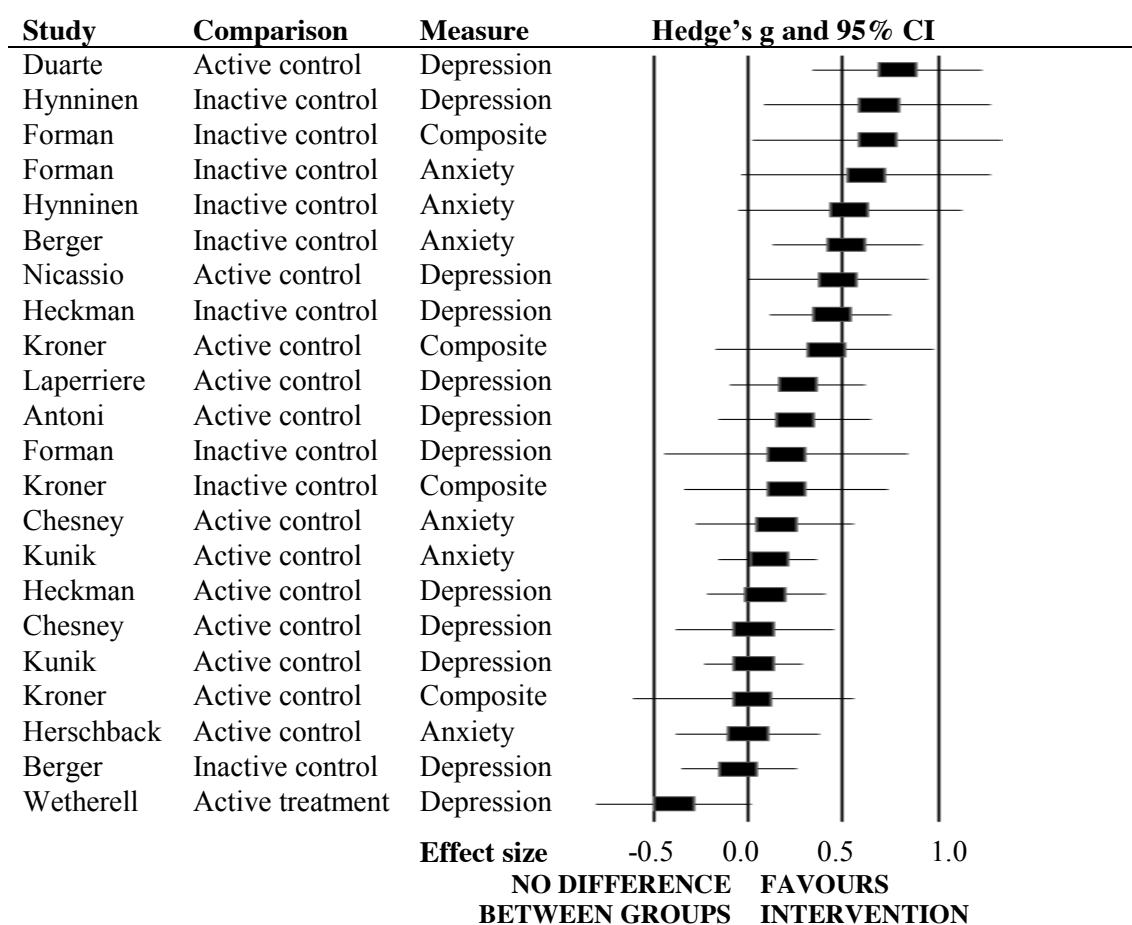
Considering studies that used an active control comparison group, 9 were included (1123 participants; Kunik *et al.*, 2008; Nicassio *et al.*, 1997; Herschbach *et al.*, 2010; Kroner *et al.*, 2003; Chesney *et al.*, 2003; Antoni *et al.*, 2006; Laperriere *et al.*, 2005; Duarte *et al.*, 2009; Heckman *et al.*, 2007). Three of these studies reported two outcome measures each (Herschbach *et al.*, 2010; Kroner *et al.*, 2003; Chesney *et al.*, 2003; Kunik *et al.*, 2008). The mean effect size calculated from these resulting 12 effect sizes was 0.21. Although this suggests some level of change, the pooled result for group CBT compared to an active control is not as convincing as when it is compared to an inactive control. For follow up data, the mean effect size was 0.19 (follow up data unavailable for Kroner *et al.*, 2003).

#### *Active treatment control groups*

Only one study used an active treatment comparison (Wetherell *et al.*, 2011). As such, it cannot be included in a pooled analysis. The difference between groups post-treatment showed an effect size of 0.39. However, a similar effect was found between the pre-treatment groups (0.31), suggesting that overall there was no significant effect between groups.



The effect sizes across both comparison groups are depicted in a forest plot in Figure 2.



**Figure 2. Forest plot of the mean effect sizes post treatment**

## Discussion

This review examined the evidence for group psychological interventions for people with co-morbid physical and mental health problems. The evidence base was varied but demonstrated that group interventions, particularly those based on CBT, may be efficacious with this population. The meta-analysis of the results found a medium effect size when comparing treatment to an inactive control, and a small effect size when compared to an active control. This difference is broadly similar to research of

psychological interventions for mental health problems without physical comorbidities (NICE, 2004), and is consistent with previous similar reviews (Rizzo *et al.*, 2011; van Straten *et al.*, 2010). However, it adds to this body of evidence as previous research has focused either on multiple psychological disorders but a single physical diagnosis, or several physical diagnoses but an individual psychological problem.

A number of features of this review set it apart from previous ones. Its focus on group interventions is topical, both from the need to improve service cost-effectiveness in a challenging economic climate and the increasing demand on services treating mental health within physical settings (Naylor *et al.*, 2012). The broad focus of this review on mental health problems rather than a single mental health diagnosis is more consistent with clinical presentations, particularly in terms of psychological comorbidities and led to inclusion of a number of clinically relevant studies that were not eligible for inclusion in previous reviews.

The high number of studies that met the stringent quality criteria indicates that it is a priority within the research community. However, CBT was the focus for the majority of studies. Other psychological models, such as Interpersonal Psychotherapy (IPT; Weissman, Markowitz & Klerman, 2000) or Acceptance and Commitment Therapy (ACT; Hayes *et al.*, 2011) have a growing evidence base but are often delivered individually or as part of a multi-disciplinary package (e.g. McCracken, Vowles & Eccleston, 2005; Lespérance *et al.*, 2007). While both of these formats are important to examine, there is also a need to evaluate psychological interventions in group

formats in isolation to better understand whether these are efficacious, or whether additional features are critical. In addition, analysis of specific psychological processes is lacking in much of the literature, making it difficult to determine what the actual mechanism of change is. For example, evidence is lacking regarding whether in CBT cognitions change or if it is perhaps their frequency that reduces (Jacobson *et al.*, 1996). Only one of the papers included in this review contained an examination of such process measures for a comparison of Acceptance and Commitment Therapy with Cognitive Behavioural Therapy. This study, by Wetherell and colleagues (2011) was also identified as being the most methodologically robust evaluation in this review. Future research should consider evaluating a wider range of therapies.

### **Limitations**

A number of limitations of this review are worth noting. Outcome measures selected by studies varied and included composite measures as well as those targeting anxiety or depression. This wide range meant that categorising studies by measure and comparison group resulted in insufficient numbers for meta-analysis (for example, the number of studies that used a composite measure with an active control comparison). However, the alternative approach, including studies with a range of measures in the same category, may have biased the meta-analysis, and so the pooled meta-analysis findings should be interpreted with caution. While this study took a broad approach to examine the evidence for group psychological interventions in clinical health settings, the wide range of measures across these studies made this challenging, and the field would be better served by some consensus on measurement (Naylor *et al.*, 2012). Variability in the follow up periods was also found (range from 6 to 15 months).

However, although the longer term effects of these interventions are unclear, the results suggest that some benefits are maintained over time.

Inadequate reporting of study details was evident in a number of papers. For example, details about the delivery of the intervention was lacking in many studies, and few studies used a blind researcher to collect outcome data. Future research would benefit from including details such as content, session length, facilitator style, management of group dynamics, supervision and training to enable analysis to address the important question of which type of group interventions work for whom, particularly given evidence that such factors affect study outcome (e.g. Munder *et al.*, 2013).

A number of important health conditions were absent from the results of this review, such as stroke, epilepsy and gastrointestinal disease. Many others, such as neurological and cardiac health problems, were under-represented, suggesting that much of the research on co-morbid physical and mental health problems is focussed on a small number of physical diagnoses. This makes it difficult to generalise these results more broadly.

Interestingly, only one study took a transdiagnostic approach to physical health conditions for recruitment. Unfortunately, this study had a number of methodological and reporting flaws, making it difficult to establish whether a group with mixed physical health problems could be as efficacious at reducing mental health problems as one that focused on a single physical diagnosis.

## **Conclusions**

In summary, this review found evidence for the efficacy of group psychological interventions across a range of chronic physical health problems. This is important in light of the need to provide services for the growing population of people with long term physical conditions, but also in the context of mental health problems adversely affecting co-morbid physical conditions. These results will therefore be useful for both practitioners and service commissioners in providing evidence-based interventions to a population with significant need.

## References

- Aben, I., Verhey, F., Lousberg, R., Lodder, J. and Honig, A. (2002). Validity of the Beck Depression Inventory, Hospital Anxiety and Depression Scale, SCL-90, and Hamilton Depression Rating Scale as Screening Instruments for Depression in Stroke Patients. *Psychosomatics*, 43(5), 386–393.
- Antoni, M.H., Carrico, A.W., Duran, R.E., Spitzer, S., Penedo, F., Ironson, G., Fletcher, M.A., Klimas, N. and Schneiderman, N. (2006). Randomized clinical trial of cognitive behavioral stress management on human immunodeficiency virus viral load in gay men treated with highly active antiretroviral therapy. *Psychosomatic Medicine*, 68, 143-151.
- Arnau, R.C., Meagher, M.W., Norris, M.P. and Bramson, R. (2001). Psychometric evaluation of the Beck Depression Inventory-II with primary care medical patients. *Health Psychology*, 20(2), 112-119.
- Baraniak, A. and Sheffield, D. (2011). The efficacy of psychologically based interventions to improve anxiety, depression and quality of life in COPD: a systematic review and meta-analysis. *Patient Education and Counselling*, 83(1), 29-36.
- Beck, A. T., Epstein, N., Brown, G. and Steer, R.A. (1988). An inventory for measuring clinical anxiety: Psychometric properties. *Journal of Consulting and Clinical Psychology*, 56(6), 893-897.
- Beck, A.T., Steer, R.A., Carbin, M.G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review*. 8(1), 77–100.

- Begg C, Cho M, Eastwood S, Horton, R., Moher, D., Olkin, I., Pitkin, R., Rennie, D., Schulz, K.F., Simel, D. and Stroup, D.F. (1996). Improving the quality of reporting of randomized controlled trials. The CONSORT statement. *JAMA*, 276(8), 637-639.
- Berger, S., Schad, T., von Wyl, V., Ehler, U., Zellweger, C., Furrer, H., Refli, D., Vernazza, P., Ledergerber, B., Battegay, M., Weber, R. and Gaab, J. (2008), Effects of cognitive behavioral stress management on HIV-1 RNA, CD4 cell counts and psychosocial parameters of HIV-infected persons. *AIDS*, 22, 767-775.
- Bieling, P.J., Antony, M.M. and Swinson, R.P. (1998). The State--Trait Anxiety Inventory, Trait version: structure and content re-examined. *Behaviour Research and Therapy*, 36(7), 777–788.
- Bjelland, I., Dahl, A.A., Haug, T.T. and Neckelmann, D. (2002). The validity of the Hospital Anxiety and Depression Scale: An updated literature review. *Journal of Psychosomatic Research*, 52(2), 69-77.
- Blalock, S.J., Devellis, R.F., Brown, G.K. and Wallston, K.A. (1989). Validity of the center for epidemiological studies depression scale in arthritis populations. *Arthritis & Rheumatism*, 32(8), 991–997.
- Blumenthal, J.A., Lett, H.S., Babyak, M.A., White, W., Smith, P.K., Mark, D.B., Jones, R., Matthews, J.P. and Newman, M.F. (2003). Depression as a risk factor for mortality after coronary bypass surgery. *The Lancet*, 362(9384), 604–609.
- Burlingame, G., Kapetanovic, S., & Ross, S. (2005). Group psychotherapy. In *The handbook of group research and practice*. (pp. 387-407). Thousand Oaks, CA: SAGE Publications.

- Burlingame, G.M., MacKenzie, K.R. and Strauss, B. (2004). Small group treatment: Evidence for effectiveness and mechanisms of change. In M. Lambert (Ed.) *Handbook of psychotherapy and behaviour change* (pp. 213-249). New York: Wiley.
- Castel, A., Cascon, R., Padrol, A., Sala, J. and Rull, M. (2012). Multicomponent cognitive-behavioral group therapy with hypnosis for the treatment of fibromyalgia: Long-term outcome. *The Journal of Pain*, 13(3), 255-265.
- Chesney, M., Chambers, D.B., Taylor, J.M., Johnson, L.M. and Folkman, S. (2003). Coping effectiveness training for men living with HIV: Results from a randomized clinical trial testing a group-based intervention. *Psychosomatic Medicine*, 65, 1038-1046.
- Cimpean, D. and Drake, R.E. (2011). Treating co-morbid chronic medical conditions and anxiety/depression. *Epidemiology and Psychiatric Sciences*, 20(2), 141-150.
- Das-Munshi, J., Goldberg, D., Bebbington, P.E., Bhugra, D.K., Brugha, T.S., Dewey, M.E., Jenkins, R., Stewart, R. and Prince, M. (2008). Public health significance of mixed anxiety and depression beyond current classification. *British Journal of Psychiatry*, 192, 171-177.
- Department of Health (2011). *No health without mental health: A cross-government mental health outcomes strategy for people of all ages*. London: Department of Health.
- Derogatis, L.R. and Unger, R. (2010). Symptom Checklist-90-Revised. *Consini Encyclopedia of Psychology*, 1-2.



- Duarte, P.S., Miyazaki, M.C., Blay, S.L. and Sesso, R. (2009). Cognitive-behavioral group therapy is an effective treatment for major depression in hemodialysis patients. *Kidney International*, 76, 414-421.
- Dunst, C.J., Hamby, D.W. and Trivette, C.M. (2004). Guidelines for calculating effect sizes for practice-based research syntheses. *Centerscope*, 3(1), 1.
- Egede, L.E. (2007). Major depression in individuals with chronic medical disorders: prevalence, and correlates and associates of health resource utilisation, lost productivity and functional disability. *General Hospital Psychiatry*, 29, 409–416.
- Fekete, E.M., Antoni, M.H. and Schneiderman, N. (2007). Psychosocial and behavioral interventions for chronic medical conditions. *Current Opinion in Psychiatry*, 20(2), 152-157.
- Forman, A.C. and Lincoln, N.B. (2010). Evaluation of an adjustment group for people with multiple sclerosis: a pilot randomized controlled trial. *Clinical Rehabilitation*, 24, 211-221.
- Fortin M. and van den Akker, M. (2007). Multimorbidity's many challenges. *British Medical Journal*, 334 (7602), 1016-1017.
- Geisser, M.E., Roth, R.S., Robinson, M.E. (1997). Assessing Depression among Persons with Chronic Pain Using the Center for Epidemiological Studies-Depression Scale and the Beck Depression Inventory: A Comparative Analysis. *Clinical Journal of Pain*, 13(2), 163-170.
- Grothe, K.B., Dutton, G.R., Jones, G.N., Bodenlos, J., Ancona, M. and Brantley, P.J. (2005). Validation of the Beck Depression Inventory-II in a Low-Income

- African American Sample of Medical Outpatients. *Psychological Assessment*, 17(1), 110-114.
- Gunn, J.M., Darshini, R.A., Konstancja, D., Pallant, J.F., Chondros, P., Herrman, H.E. and Dowrick, C.F. (2012). The association between chronic illness, multimorbidity and depressive symptoms in an Australian primary care cohort. *Social Psychiatry and Psychiatric Epidemiology*, 47(2), 175-184.
- Hann, D., Winter, K., and Jacobsen, P. (1999). Measurement of depressive symptoms in cancer patients: Evaluation of the center for epidemiological studies depression scale (Ces-d). *Journal of Psychosomatic Research*, 46(5), 437–443.
- Hansen, N.B., Tarakeshwar, N., Ghebremichael, M., Shang, H., Kochmen, A. and Sikkema, K.J. (2006). Longitudinal effects of coping on outcome in a randomized controlled trial of a group intervention for HIV-positive adults with AIDS-related bereavement. *Death Studies*, 30, 609-636.
- Hardt, J., Gerbershagen, H.U. and Franke, P. (2000). The symptom check-list, SCL-90-R: its use and characteristics in chronic pain patients. *European Journal of Pain*, 4(2), 137–148.
- Hayes, S.C., Strosahl, K.D. and Wilson, K.G. (2011). Acceptance and Commitment Therapy: The Process and Practice of Mindful Change. The Guilford Press, New York, NY (2011).
- Heckman, T.G., Sikkema, K.J., Hansen, N., Kochman, A., Heh, V. and Neufeld, S. (2011). A randomized clinical trial of a coping improvement group intervention for HIV-infected older adults. *Journal of Behavioral Medicine*, 34, 102-111.
- Herschbach, P., Berg, P., Waadt, S., Duran, G., Engst-Hastreiter, U., Henrich, G., Book, K. and Dinkel, A. (2010). Group psychotherapy of dysfunctional fear of

- progression in patients with chronic arthritis or cancer. *Psychotherapy and Psychosomatics*, 79, 31-38.
- Higgins, J.P.T. and Green, S. (2011). *Cochrane Handbook for Systematic Reviews of Interventions* Version 5.1.0. The Cochrane Collaboration.
- Hornsten, C., Lövheim, H. and Gustafson, Y. (2013). The Association Between Stroke, Depression, and 5-Year Mortality Among Very Old People. *Stroke*, 44, 2587-2589.
- Hynninen, M.J., Bjerke, N., Pallesen, S., Bakke, P.S. and Nordhus, I.H. (2010). A randomized controlled trial of cognitive behavioral therapy for anxiety and depression in COPD. *Respiratory Medicine*, 104, 986-994.
- Jacobson NS, Dobson KS, Truax PA, *et al.* (1996). A component analysis of cognitive-behavioral treatment for depression. *Journal of Consulting Clinical Psychology*, 64(2):295–304.
- Jüni, P., Witschi, A., Bloch, R., Egger, M. (1999). The hazards of scoring the quality of clinical trials for meta-analysis. *JAMA*, 282, 1054-1060.
- Kabacoff, R.I., Segal, D.L., Hersen, M., Van Hasselt, V.B. (1997). Psychometric properties and diagnostic utility of the Beck Anxiety Inventory and the state-trait anxiety inventory with older adult psychiatric outpatients. *Journal of Anxiety Disorders*, 11(1), 33–47.
- Katon, W. J., Rutter, C., Simon, G., Lin, E. H., Ludman, E., Ciechanowski, P., Kinder, L., Young, B. and Von Korff, M. (2005). The association of comorbid depression with mortality in patients with type 2 diabetes. *Diabetes Care*, 28(11), 2668-2672.

- Katz, P.P. and Yelin, E.H. (1993). Prevalence and correlates of depressive symptoms among persons with rheumatoid arthritis. *The Journal of Rheumatology*, 20(5), 790-796.
- Klaasen, T., Verhey, F.R.J., Sneijders, G.H.J.M., de Vet, H.C.W., van Praag, H.M. (1995). Treatment of depression in Parkinson's disease: a meta-analysis. *The Journal of Neuropsychiatry and Clinical Neurosciences*, 7, 281-286.
- Kunik, M.E., Veazey, C., Cully, J.A., Soucek, J., Graham, D.P., Hopko, D., Carter, R., Sharafkhan, A., Goepfert, E.J., Wray, N. and Stanley, M.A. (2008). COPD education and cognitive behavioral therapy group treatment for clinically significant symptoms of depression and anxiety in COPD patients: a randomized controlled trial. *Psychological Medicine*, 38, 385-396.
- Laperriere, A., Ironson, G.H., Antoni, M.H., Pomm, H., Jones, D., Ishii, M., Lydston D., Lawrence, P., Grossman, A., Brondolo, E., Cassells, A., Tobin, J.N., Schneiderman, N. and Weiss, S.M. (2005). Decreased depression up to one year following CBSM+ intervention in depressed women with AIDS: The Smart/EST Women's project. *Journal of Health Psychology*, 10(2), 223-231.
- Leentjens, A.F.G., Dujardin, K., Marsh, L., Richard, I.H., Starkstein, S.E. and Martinez-Martin, P. (2011). Anxiety rating scales in Parkinson's disease: A validation study of the Hamilton anxiety rating scale, the Beck anxiety inventory, and the hospital anxiety and depression scale. *Movement Disorders*, 26(3), 407-415.
- Leshner, E. L., & Berryhill, J. S. (1994). Validation of the Geriatric Depression Scale-Short Form among inpatients. *Journal of clinical psychology*.

- Lespérance, F., Frasure-Smith, N., Koszycki, D., Laliberté, M., van Zyl, L.T., Baker, B., Swenson, J.R., Ghatavi, K., Abramson, B.L., Dorian, P. and Guertin, M. (2007). The Canadian Cardiac Randomized Evaluation of Antidepressant and Psychotherapy Efficacy (CREATE) Trial. *The Journal of the American Medical Association*, 297(4), 367-379.
- Lim, L., Jin, A.Z. and Ng, T.P. (2012). Anxiety and depression, chronic physical conditions, and quality of life in an urban population sample study. *Social Psychiatry and Psychiatric Epidemiology*, 47(7), 1047-1053
- Linden, W., Phillips, M.J. and Leclerc, J. (2007). Psychological treatment of cardiac patients: a meta-analysis. *European Heart Journal*, 28(24), 2972-2984.
- Löwe, B., Schulz, U., Gräfe, K. and Wilke S. (2006). Medical Patients' Attitudes Toward Emotional Problems and Their Treatment: What Do They Really Want? *Journal of General Internal Medicine*, 21(1), 39-45.
- McCracken, L.M., Vowles, K.E. and Eccleston, C. (2005). Acceptance-based treatment for persons with complex, long standing chronic pain: a preliminary analysis of treatment outcome in comparison to a waiting phase. *Behaviour Research and Therapy*, 43, 1335-1346.
- Merswolken, M., Siebenhuener, S., Orth-Gomer, K., Simmermann-Viehoff, F. and Deter, H. (2011). Treating anxiety in patients with coronary heart disease: A randomized controlled trial. *Psychotherapy and Psychosomatics*, 80, 365-370.
- Molosankwe, I., Patel, A., José Gagliardino, J., Knapp, M., McDaid, D. (2012). Economic aspects of the association between diabetes and depression: a systematic review. *Journal of Affective Disorders*, 142(Supplement), S42-55.

- Moussavi, S., Chatterji, S. and Verdes, E. (2007). Depression, chronic disease and decrements in health results from the World Health Surveys. *The Lancet*, 370, 851–858.
- Munder, T., Brüttsch, O., Leonhart, R., Gerger, H. and Barth, J. (2013). Researcher allegiance in psychotherapy outcome research: An overview of reviews. *Clinical Psychology Review*, 33(4), 501-511.
- National Institute for Clinical Excellence (NICE) (2010). *Depression in Adults with a Chronic Physical Health Problem, Treatment and Management*. Accessed <http://www.nice.org.uk/nicemedia/live/12327/45913/45913.pdf> 27th January 2014
- National Institute for Clinical Excellence (NICE) (2004). *Depression: management of depression in primary and secondary care: NICE Guideline CG23*. London: National Institute for Clinical Excellence.
- Naylor, C., Parsonage, M., McDaid, D., Knapp, M., Fossey, M. and Galea, A. (2012). *Long-term conditions and mental health: The cost of co-morbidities*. London: The King's Fund and Centre for Mental Health.
- Nicassio, P.M., Radojevic, V., Weisman, M.H., Schuman, C., Kim, J., Schoenfeld-Smith, K. and Krall, T. (1997). A comparison of behavioral and educational interventions for fibromyalgia. *The Journal of Rheumatology*, 24, 2000-2007
- Oei, T.P.S. and Dingle, G. (2008). The effectiveness of group cognitive behaviour therapy for unipolar depressive disorders. *Journal of Affective Disorders*, 107, 5-21.
- Okun, A., Stein, R. E., Bauman, L. J., & Silver, E. J. (1996). Content validity of the psychiatric symptom index CES-Depression scale, and State-Trait Anxiety

- Inventory from the perspective of DSM-IV. *Psychological reports*, 79(3), 1059-1069.
- Opolski, M. and Wilson, I. (2005) Asthma and depression: a pragmatic review of the literature and recommendations for future research. *Clinical and Practice and Epidemiology in Mental Health*, 1, 18.
- Ormel, J. Von Korff, M., Burger, H., Scott, K., Demyttenaere, K., Huang, Y.Q., Posada-Villa, J., Angermeyer, M.C., Levinson, D., de Girolamo, G., Kawakami, N., Karam, E., Medina-Mora, M.E., Gureie, O., Williams, D., Haro, J.M., Bromet, E.J., Alonso, J. and Kessler, R. (2007). Mental disorders among persons with heart disease—results from World Mental Health surveys. *General Hospital Psychiatry*, 29, 325–332.
- Osborn, M. and Smith, J.A. (1998). The personal experience of chronic benign lower back pain: An interpretative phenomenological analysis. *British Journal of Health Psychology*, 3, 65-83.
- Poole, H., White, S., Blake, C., Murphy, C. and Bramwell, R. (2009). Depression in chronic pain patients: prevalence and measurement. *Pain practice*, 9(3), 173-180.
- Rayner, L., Price, A., Evans, A., Valsraj, K., Higginson, I.J. and Hotopf, M. (2010). Antidepressants for depression in physically ill people. *Cochrane Database of Systematic Reviews*, 3. Art. No.: CD007503.
- Rizzo, M., Creed, F., Goldberg, D., Meader, N. and Pilling, S. (2011). A systematic review of non-pharmacological treatments for depression in people with chronic physical health problems. *Journal of Psychosomatic Research*, 71, 18-27.

- Robinson, S.K., Viirre, E.S., Bailey, K.A., Kindermann, S., Minassian, A.L., Goldin, P.R., Pedrelli, P., Harris, J.P. and McQuaid, J.R. (2008). A randomized controlled trial of cognitive-behavior therapy for tinnitus. *The International Tinnitus Journal*, 14(2), 119-126.
- Ross, C.J.M., Davis, T.M.A and MacDonald, G.F. (2005). Cognitive-behavioral treatment combined with asthma education for adults with asthma and coexisting panic disorder. *Clinical Nursing Research*, 14, 131.
- Rybarczyk, B., DeMarco, G., DeLaCruz, M., Lapidos, S. and Fortner, B. (2001). A classroom mind/body wellness intervention for older adults with chronic illness: comparing immediate and 1-year benefits. *Behavioral Medicine*, 27(1), 15-27.
- Snoek, F.J., van der Ven, N.C.W. and Lubach, C. (1999). Cognitive behavioral group training for poorly controlled type I diabetes patients: A psychoeducational approach. *Diabetes Spectrum*, 12(3), 147.
- Snoek, F.J., van der Ven, N.C.W. and Twisk, J.W.R. and Hogenelst, M.H.E. (2008). Cognitive behavioural therapy (CBT) compared with blood glucose awareness training (BGAT) in poorly controlled type I diabetic patients: long-term effects on HbA1c moderated by depression. A randomized controlled trial. *Diabetic Medicine*, 25, 1337-1342.
- Steed, L., Cooke, D. and Newman, S. (2003). A systematic review of psychosocial outcomes following education, self-management and psychological interventions in diabetes mellitus. *Patient education and counseling*, 51(1), 5-15.



- Tucker, M. and Oei, T.P.S. (2007). Is group more cost effective than individual cognitive behaviour therapy? The evidence is not solid yet. *Behavioural and Cognitive Psychotherapy*, 35, 77-91.
- Van der Ven, N.C.W., Hogenelst, M.H.E., Tromp-Wever, A.M.E., Twisk, J.W.R., van der Ploeg, H.M. Heinet, R.J. and Snoek, F.J. (2005). Short-term effects of cognitive behavioral group training (CBGT) in adult type I diabetes patients in prolonged poor glycaemic control. A randomized controlled trial. *Diabetic Medicine*, 22, 1619-1623.
- Van Straten, A., Geraedts, A., Leeuw, I.V., Andersson, G. and Cuijpers, P. (2010). Psychological treatment of depressive symptoms in patients with medical disorders: A meta-analysis. *Journal of Psychosomatic Research*, 69, 23-32.
- Vlaeyen, J.W.S., Teeken-Gruben, N.J.G., Goossens, M.E.J.B., Rutten, M.P.M.H., Pelt, R.A.G.B., van Eek, H. and Heuts, P.H.T.G. (1996). Cognitive-educational treatment of fibromyalgia: a randomized clinical trial. I. Clinical effects. *The Journal of Rheumatology*, 23(7), 1237-1245.
- Weintraub, D., Oehlberg, K. A., Katz, I. R., & Stern, M. B. (2006). Test characteristics of the 15-item geriatric depression scale and Hamilton depression rating scale in Parkinson disease. *The American journal of geriatric psychiatry*, 14(2), 169-175.
- Weiss, J.J., Mulder, C.L., Antoni, M.H., de Vroome, E.M.M., Garssen, B. and Goodkin, K. (2003). Effects of a supportive-expressive group intervention on long-term psychosocial adjustment in HIV-infected gay men. *Psychotherapy and Psychosomatics*, 72, 132-140.

- Weissman, M.M., Markowitz, J.C. and Klerman, G.L. (2000). Comprehensive guide to interpersonal psychotherapy. New York: Basic Books.
- Welch, G.W., Jacobson, A.M. and Polonsky, W.H. (1997). The Problem Areas in Diabetes Scale: An evaluation of its clinical utility. *Diabetes Care*, 20(5), 760-766.
- Wetherell, J.L. and Areán, P.A. (1997). Psychometric evaluation of the Beck Anxiety Inventory with older medical patients. *Psychological Assessment*, 9(2), 136-144.
- Wetherell, J.L., Niloofar, A., Rutledge, T., Sorrell, J.T., Stoddard, J.A., Petkus, A.J., Solomon, B.C., Lehman, D.H., Liu, L. Lang, A.J. and Atkinson, J.H. (2011). A randomized, controlled trial of acceptance and commitment therapy and cognitive-behavioral therapy for chronic pain. *Pain*, 152, 2098-2107.
- Whooley, M.D., de Jonge, P., Vittinghoff, E., Otte, C., Moos, R., Carney, R.M., Ali, S., Dowray, S., Na, B., Feldman, M.D., Schiller, N.B., Browner, W.S. (2008). Depressive symptoms, health behaviors, and risk of cardiovascular events in patients with coronary heart disease. *JAMA*, 300(20), 2379–2388.
- Yalom, I.D., and Leszcz, M. (2005). *The theory and practice of group psychotherapy* (5th ed.) New York: Basic Books.
- Yates, S.L., Morley, S., Eccleston, C. and Williams, A.C. (2005). A scale for rating the quality of psychological trials for pain. *Pain*, 117, 314-325.
- Zigmond, A.S. and Snaith, R.P. (1983). The hospital anxiety and depression scale. *Acta Psychiatrica Scandinavica*, 67(6), 361-370.

## **Journal Article 2**

### **Better Living with Illness:**

#### **A Transdiagnostic Acceptance and Commitment Therapy Group**

#### **Intervention for Chronic Physical Illness**

**Word count: 5522**

**Better Living with Illness:**  
**A Transdiagnostic Acceptance and Commitment Therapy Group**  
**Intervention for Chronic Physical Illness**

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Running title: Transdiagnostic Acceptance and Commitment Therapy for physical illness.

## **Abstract**

*Background:* Chronic illness is on the rise and is associated with increased risk of psychological problems. Commonalities across physical conditions suggests a transdiagnostic psychological intervention may be beneficial. An Acceptance and Commitment Therapy (ACT) group intervention was evaluated for people with chronic physical health problems.

*Methods:* Participants with long term physical health conditions were invited to an ACT group (n=53). Measures were completed at assessment, pre, post and 3-month follow-up. These assessed anxiety and depression symptoms, health perceptions, values-based living and psychological flexibility. Period from assessment to pre intervention served as a within-participant control.

*Results:* Depression and anxiety symptoms reduced significantly from pre to post, compared to control period. Significant improvements were found in values-based living and psychological flexibility. These changes were in the context of non-significant changes in health perceptions.

*Conclusions:* Group-based ACT interventions may be beneficial for chronic illness and can be delivered transdiagnostically.

**Keywords**

Chronic illness

Psychological

Group

Acceptance

Transdiagnostic

## **Introduction**

Chronic illness is one of the most significant challenges faced by healthcare systems (Naylor *et al.*, 2012). Long-term physical conditions are defined as those that require “ongoing management over a number of years or decades” (WHO, 2002, p11). In addition to their societal impact, there is widespread acknowledgement that the personal impact of a chronic illness is greater than the physical symptoms alone (NHS Confederation, 2012). Individual experiences can vary, with some conditions being relatively stable (e.g. chronic low back pain) and others being progressive, such as multiple sclerosis, Alzheimer’s Disease or arthritis. Despite these differences, many people with chronic illnesses share common challenges, such as living with daily pain (Department of Health, 2012a) and difficulties performing everyday tasks (Hoffman, Rice & Sung, 1996). People with long-term conditions are two to three times more likely to develop psychological problems such as depression, compared to the general population (Moussavi, Chatterji & Verdes, 2007).

Traditional medical interventions aim to reduce and manage physical symptoms and enhance quality of life in chronic illness (Grumbach, 2003), but psychological interventions are increasingly playing an important role in the broader care of this population. Growing evidence suggests that psychological interventions such as cognitive behavioural therapy (CBT) can moderate the psychological impact of chronic illness across a range of conditions, such as multiple sclerosis (Mohr *et al.*, 2001), human immunodeficiency virus (Markowitz *et al.*, 1998), kidney disease (Duarte *et al.*, 2009) and chronic obstructive pulmonary disease (Hynninen *et al.*, 2001). The benefits of these interventions may not only be psychological: physical



improvements in chronic illness, such as better glycemic control in diabetes (Alam *et al.*, 2009) and reductions in pain (Vowles & McCracken, 2008) have also been reported following psychological intervention.

Much of this evidence is for single diagnoses, with each trial evaluating an intervention for an individual chronic illness. This diagnosis-specific approach, drawing on the medical model that underpins much of physical healthcare, is common in psychological intervention research (Taylor & Clark, 2009), with protocols often designed for specific psychiatric diagnosis populations such as panic disorder, unipolar depression or posttraumatic stress disorder (Butler, Chapman, Forman, & Beck, 2006). This approach has been criticised, however, and much of the critique is also relevant to psychological interventions in physical health settings (Mansell *et al.* 2009). For example, one important challenge for psychological research, in both mental health and chronic illness settings, is comorbidity. More than half of those living with long term physical health problems have more than one condition, and this is set to rise (Barnett *et al.*, 2012; Trento *et al.* 2012), yet the majority of research excludes participants with comorbid conditions (McManus *et al.*, 2010). Dissemination also presents a significant challenge to this approach, with therapists requiring training in a many protocols in order to deliver evidence-based services (Taylor & Clark, 2009). Clearly, these challenges make it difficult to translate research to clinical populations (Barlow *et al.*, 2004).

Some researchers have responded by advocating a transdiagnostic or unified approach to psychological interventions in mental health settings (Barlow *et al.*, 2004).

Research linking emotion regulation processes such as rumination and avoidance to a wide range of psychiatric diagnoses (McLaughlin & Nolen-Hoeksema, 2012; Aldao, Nolen-Hoeksema & Schweizer, 2010) has led some to suggest therapies could be used across diagnoses with minimal adaptations (Taylor & Clark, 2009). To date, transdiagnostic approaches have focused on common underlying processes for psychological difficulties in mental health settings, outside of physical health services.

Most of these approaches have typically fallen into two broad categories. The first outlines interventions that could be delivered across a broad group of related diagnoses, such as mixed anxiety disorders (e.g. Norton & Hope, 2005), a range of eating disorders (Fairburn *et al.*, 2003) and post-psychosis emotion dysfunction (White *et al.*, 2011). Although not labelled as such, evaluations of physically transdiagnostic approaches have also been reported, including psychological interventions being used with a group of related physical diagnoses for bowel disorders (Drossman *et al.*, 2003) and cardiac diseases (Elliot *et al.*, 2014).

The second category of transdiagnostic research proposes that psychological treatment can be applied across the majority of disorders with minimal adaptation. Examples include a cognitive behavioural therapy (CBT) protocol for a range of anxiety and depression disorders (McEvoy & Nathan, 2007). One psychological intervention model that fits particularly well with this category is Acceptance and Commitment Therapy (ACT; Hayes *et al.*, 2011). ACT has developed alongside a programme of basic research proposing a behaviour analytic theory of the influence of language and cognition on behaviour, called Relational Frame Theory (RFT; Hayes, Barnes-Holmes

& Roche, 2001). Many of the central features of ACT are informed by an RFT analysis of the effect of cognition on behaviour. ACT considers that psychological disorder occurs when an individual tries to eliminate or reduce unpleasant internal experiences, such as distressing thoughts, emotions and sensations, even when doing so is likely to increase distress and limit their ability to lead a meaningful life (McCracken, 1998). The ACT model refers to this as *psychological inflexibility*, and suggests that its influence over how humans respond can be a feature across psychological disorders. ACT interventions seek to develop more flexible responses, encouraging individuals to accept difficult or adverse experiences where doing so will enable a richer and more meaningful life.

Six overlapping and interdependent processes have been identified and are thought to contribute to psychological flexibility: acceptance (willingly allowing aversive experiences to occur, rather than avoiding them), cognitive defusion (ability to step back and separate oneself from cognitions, rather than becoming entangled with them), contact with the present moment (non-judgemental awareness of the present moment, contrasted with dominance of past or future events), values (clarity about personal values), committed action (acting in accordance with personal values, rather than in an attempt to reduce aversive experiences) and self-as-context (a flexible repertoire of perspective-taking skills, rather than attachment to a dominant narrative about ourselves and others) (Hayes *et al.*, 2006). Techniques based on these processes aim to help individuals to become more flexible in their response to difficulties, and less reliant on avoiding these experiences.

Evidence for ACT spans a range of populations, including physical health settings. Examples include chronic pain (Vowles & McCracken, 2008), diabetes (Gregg *et al.*, 2007), epilepsy (Lundgren *et al.*, 2006), cancer (Rost *et al.*, 2012) and irritable bowel syndrome (Ferreira, 2011). Much of this research takes a transdiagnostic approach to psychological difficulties by including a range of psychological comorbidities for people with single physical health diagnoses. One trial in a non-physical health setting has also reported evidence suggesting ACT is an effective intervention for a psychologically transdiagnostic group, which included anxiety and depression diagnoses (Forman *et al.* 2007).

Psychological interventions in chronic illness settings are often delivered in group format and have a good evidence-base in chronic illness settings (Brassington *et al.*, under review). Group psychological therapy encompasses a wide range of formats, ranging from a focus on psychodynamic interpersonal transactions (such as those based on Yalom's (2005) group principles) to didactic psychoeducation interventions, with many interventions blending elements of both (Beiling, McCabe and Antony, 2013) Evidence suggests that group therapy is as effective as individual therapy (Burlingame, Mackenzie & Strauss, 2004; Whitfield, 2010) and offers the potential for cost savings (Morrison, 2001; Tucker & Oei, 2007). In addition to this, group therapy offers additional benefits over an individual format, such as reducing social isolation and increasing learning opportunities through a wider range of interpersonal contacts (Bieling, McCabe & Antony, 2013). It's unsurprising then that much ACT research has used group format in physical health settings.

Research into ACT interventions has also considered the mechanisms of change that are important to outcomes. This is important as it helps us understand how the therapy works, and therefore how it can be further developed, and alongside this provides evidence for the scientific basis of the model (Hayes *et al.*, 2006). A number of studies have reported such mediation analysis for ACT interventions in chronic health settings, highlighting acceptance processes as a mediator of outcome in patients with diabetes (Gregg *et al.*, 2007), and valued living as a mediator in people with epilepsy (Lundgren, Dahl & Hayes, 2008).

It is in this context that a novel ACT group intervention was developed for people with a range of chronic illnesses presenting to psychological health services in a UK NHS setting. This study hypothesized that: (i) ACT would reduce psychological distress significantly relative to a control period in a physically and psychologically transdiagnostic group living with chronic physical illness, and (ii) valued living behaviours and psychological flexibility would mediate this outcome.

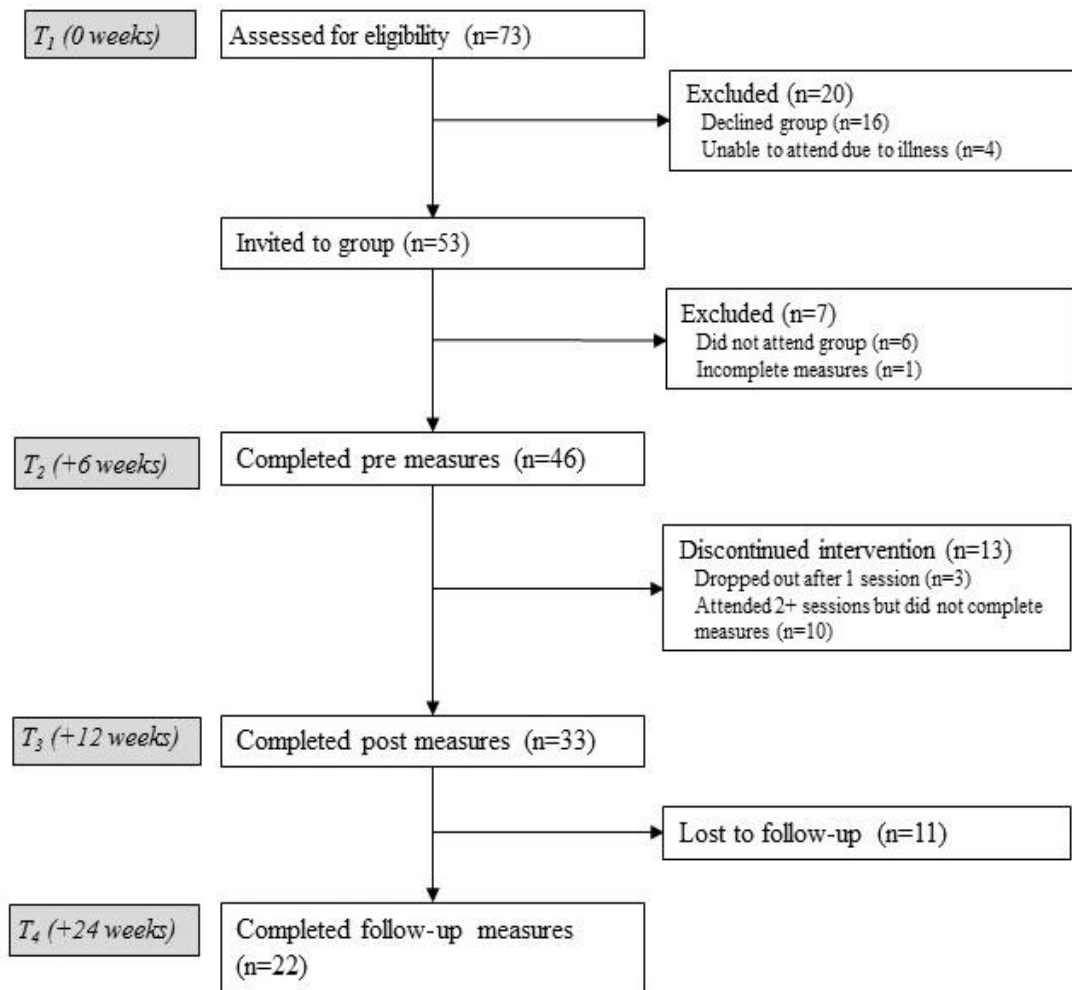
## **Methodology**

### **Participants**

Potential participants were identified by clinicians in an NHS Clinical Psychology department. Seventy-three individuals were invited to an eligibility interview with one of the two group facilitators (LB and PL). To be included, participants needed to be: aged 18 or over, English-speaking and have a long-term physical health condition

(specified as having been present for a minimum of 12 months). For the purposes of this study, cancer was not included due to the difficulties classifying it as either acute or chronic, and whether long-term self-management is required by sufferers. Participants were excluded if they had significant cognitive impairment, suicidal ideation or language or hearing difficulties, and instead received standard care. Seven groups, with between four and nine participants, took place across two locations in an NHS trust.

G\*Power (Faul, Erdfelder, Lang & Buchner, 2008) was used to calculate a target sample size for this study. Literature to date have found large and medium effect sizes in condition-specific ACT intervention studies (e.g. Lundgren *et al.*, 2006; Westin *et al.*, 2007; Gregg *et al.*, 2007; McCracken, Vowles, & Eccleston, 2005; Ferreira, 2011). A conservative medium effect size ( $f=.25$ ) was predicted for this study, and calculations indicated a required sample size of 31 group completers ( $\alpha \leq 0.05$ ,  $\beta \geq 0.80$ ).



**Figure 1: CONSORT flow chart**

## Procedure

A repeated measures design was used, with five outcome measures collected at 4 timepoints: baseline, immediately prior to session 1, end of session 6 and 3 month follow-up, as shown in Figure 1. The period from T<sub>1</sub> to T<sub>2</sub> served as the control period. This approach was selected to control for treatment effects while also offering treatment to all participants within an acceptable timescale. Referring clinicians were asked to discontinue individual appointments during the control and intervention periods where possible. Participants who failed to attend their eligibility interview

were contacted and offered an alternative date. Similarly, if a participant missed a group session, they were offered a telephone catchup for that session. Participants who attended less than 2 sessions of the group (one third of the intervention) were considered non-completers.

## **Measures**

Participants were asked to complete five questionnaires at each timepoint. The primary measure was selected to measure psychological distress. Secondary outcomes were two questionnaires to assess health status. Process measures included assessments of psychological flexibility and valued living, two key ACT processes.

### *Psychological distress*

The primary outcome measure used was the Hospital Anxiety and Depression Scale (HADS, Zigmund & Snaith, 1983). The HADS is a brief, well-established and routinely used measure of symptoms of anxiety and depression with strong test-retest reliability ( $r > 0.80$ ; Spinhoven *et al.*, 1997) and internal consistency (Cronbach  $\alpha > 0.75$ ; Mykletun *et al.*, 2001; Bjelland *et al.*, 2002). It is a self-report questionnaire containing 14 items and asks respondents to indicate the frequency that they have experienced each symptom over the previous seven days on a 4-point scale. Separate scores for anxiety and depression symptoms can be calculated, with higher scores corresponding to greater severity of symptoms. A cut-off of 8 is recommended for caseness for both anxiety and depression sub-scales (Bjelland *et al.*, 2002). This measure, originally designed for medical outpatients, has been validated for use with a number of chronic health problems, including coronary heart disease (Stafford *et al.*, 2007), myocardial



infarction and stroke (Johnston *et al.*, 2000) and multiple sclerosis (Honarmand & Feinstein, 2009).

### *Health-related quality of life*

The RAND 36-item Health Survey 1.0 (SF-36; Ware & Shelbourne, 1992) is a self-report measure of health-related quality of life (HRQOL), based on the assumption that a number of health factors contribute to perception of HRQOL. To address this, the questionnaire assesses eight health domains: physical functioning, bodily pain, physical role limitations, emotional role limitations, emotional wellbeing, social functioning, energy / fatigue and health perceptions. Responses are recoded and averaged within each of these health areas to produce scaled scores, with high scores indicating a more favourable quality of life. This widely-used questionnaire has strong reliability (Cronbach  $\alpha$  ranging from 0.78 to 0.93), and validity across a number of health conditions, including hypertension, diabetes, congestive heart failure and myocardial infarction (McHorney *et al.*, 1994).

### *Illness perceptions*

The Brief Illness Perception Questionnaire (BIPQ; Broadbent *et al.*, 2006) is an 8-item self-report questionnaire with each question using an 11-point scale. The questions relate to perceptions about different aspects of health, from how long they expect their health problems to last, to how much control they feel they have over their illness. As such, this provides a measure of participants' cognitive evaluation of their health status. The authors suggest that three of the eight items are reverse scored to provide an overall score, and validation data across a number of health settings, such as chronic

pain, indicates good test-retest reliability and concurrent validity with a number of relevant measures (Cronbach  $\alpha = 0.72$ ; Løchting *et al.*, 2013).

### *Psychological flexibility*

To assess psychological flexibility as a general process, the Acceptance and Action Questionnaire II (AAQ-II; Bond *et al.*, 2011) was included. This self-report questionnaire includes 7 statements rated on a 7-point likert scale from “Never true” to “Always true”. Scores can be summed to produce an overall score, with higher scores indicating lower levels of acceptance and psychological flexibility. Reliability of this questionnaire is strong (mean  $\alpha = 0.84$ ) and its validity has been established in non-clinical populations ( $r=0.71$ , Bond *et al.*, 2011), with evidence suggesting use of 28 as a cut-off score for psychopathology (Bond *et al.*, 2011). ( $r=0.71$ , Bond *et al.*, 2011). Illness-specific variations of this measure have been developed, but due to the physically transdiagnostic nature of this intervention, the AAQ-II was considered to be the most appropriate.

### *Valued living*

The novel Valuing Questionnaire (Smout *et al.*, 2014), a 10-item self-report measure, was selected to assess changes in valued living. It asks respondents to rate statements on a scale from 0 (“Not at all true”) to 6 (“Completely true”) with half of the items targeting progress towards living life in accordance with values (such as “I continued to get better at being the kind of person I want to be”), and the remainder targeting barriers and obstructions to this (for example, “It seemed like I was just ‘going through the motions’, rather than focusing on what was important to me”). Separate scores for

progress and obstruction can be summed, with higher scores on the progress scale indicating greater valued living behaviours, and higher obstruction scale scores indicating impaired valued-living. The authors report good internal consistency (Cronbach  $\alpha = 0.94$ ) and correlations between both subscales and existing validated measures of psychological wellbeing and distress in student and outpatient mental health samples ( $r=0.19-0.70$ , Smout *et al.*, 2014). Cut-off scores for caseness in this measure have not yet been reported.

### **Intervention**

The group intervention comprised weekly sessions for six weeks, lasting 2.5 hours (including a short break), plus two follow-up sessions one and three months later. Groups were staggered across the year to mitigate any seasonal effects that could compound treatment effects. Table 1 outlines the content of the group sessions. Participants were provided with group workbooks to use during and following group sessions (e.g. to structure homework and remind them of content and exercises covered).

A treatment manual was developed by the authors based on existing evidence-based ACT protocols for specific physical health conditions such as irritable bowel syndrome and chronic pain (Ferreira & Gillanders, 2012; Vowles & McCracken, 2008; available on [www.contextualscience.org](http://www.contextualscience.org)). As well as all of the ACT processes (cognitive defusion, present moment awareness, self as context, values, acceptance and committed action), the protocol also included four additional elements to address common barriers to increasing behaviours in line with personal values for people

living with chronic illness: problem solving skills, pacing to gradually improve function, assertive communication skills and goal setting. These elements were considered part of the therapy and were consistent with ACT in their delivery (e.g. pacing to increased valued behaviours rather than minimise aversive experiences such as pain). The manual focused on experiential exercises and the use of metaphors in accordance with the principles of the ACT model, and is included in Appendix 3.

Facilitators of the group were a qualified health psychologist, PL, with extensive experience delivering group psychological interventions, and a trainee clinical psychologist (LB). Both facilitators received more than six days generic training in the ACT model, as well as 2 training sessions specific to this intervention. This training included teaching, experiential exercises and role play covering the core exercises in the manual and discussion of scenarios that may occur in therapy. Supervision, including using audiotapes, comprised of at least two meetings per group with DG, a founder member of the Association for Contextual Behavioural Science, and NF, both experienced researchers and trainers of ACT, in addition to regular individual supervision with SY, also an ACT-trained therapist with extensive experience working with people with long term physical conditions.

## **Ethics**

East of Scotland Research Ethics Service (reference 12-GA-086) and University of Edinburgh Department of Clinical and Health Psychology Ethics Committee approved this study and categorised it as a service evaluation prior to any data collection

(Appendix 4). All participants signed a consent form for study participation (Appendix 5).

**Table 1: Session content of group**

Session	Content
1	Introductions and treatment rationale. Creative hopelessness exercises, including primary / secondary suffering and workability of coping strategies.
2	Getting stuck with symptoms, thoughts and feelings versus moving forward with them using an experiential version of Passengers on the Bus metaphor <sup>14</sup> . An introduction to mindfulness.
3	Clarification of personal values.
4	Goal setting, cognitive defusion from thoughts and problem solving skills.
5	Assertive communication skills, willingness and committing to action.
6	Pacing, review of intervention and setback preparation.
Follow ups	Tailored to specific ongoing issues in making progress with goals.

### Statistical Analyses

Data analyses was conducted using Statistical Package for the Social Sciences (SPSS) version 21.0. Data was checked for errors or missing data. Where missing data was less than 5%, mean imputation, case mean imputation (for individual questions) or sample mean imputation (for whole missing questionnaires) was used (Chavance, 2004). Repeated measure ANOVAS with post-hoc Bonferroni adjusted pairwise comparisons were used to analyse results both for complete sets of pre-post data (using

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<sup>14</sup> Metaphor adapted from Hayes, Strohsl and Wilson (1999), accessed at <http://onlinelibrary.wiley.com/store/10.1002/9781118499184.app3/as-set/app3.pdf?v=1&t=i6q9tsdr&s=5b178d9f490701b0b4387959ed88e4b65a30daa4> or available in the intervention protocol.

LOCF, last-observation-carried-forward, for participants lost to follow-up) alongside a more conservative intention-to-treat (ITT) method, with scores returning to pre-intervention ( $T_2$ ) level for participants who dropped out. Only participants who attended at least 2 sessions of the intervention were included in the analyses. Where Mauchly's test showed that sphericity had been violated, Greenhouse-Geiser (if  $\epsilon < .75$ ) or Huynh-Feldt (if  $\epsilon > .75$ ) corrections were used. Significant changes in the primary outcomes were predicted to be mediated by changes in psychological flexibility and valued living. As such, a mediation model with these processes as possible mediators was tested using an Ordinary Least Squares (OLS) method (Judd, Kenny & McClelland, 2001) for ITT data, with scores returning to pre-intervention for drop-outs. Bootstrapping was used to test these findings given the small sample size.

## **Results**

### **Preliminary Analyses**

Examination indicated that missing data was missing completely at random, with 0.57% of whole questionnaires missing, and a further 0.58% of individual questions missing. As such, mean imputation used to replace missing values (Chavance, 2004). The majority of variables were found to have normal distributions sufficient for assumptions of robust parametric tests (Field, 2009), with the exception of the Physical Limits, Emotional Limits, Fatigue and General subscales of the SF-36. Attempts to correct non-normal data were unsuccessful, and as such non-parametric tests were used for this data.

Completers (those who attended two or more sessions) and non-completers did not differ significantly at baseline in terms of demographic characteristics or measures (see Tables 2 and 3). The average number of sessions attended by completers was 5.70 (SD=1.95; Mode=7). One participant received one individual session during the control period, and another received one individual session during the intervention period. Three participants received a telephone catchup for a missed session.

### **Primary Analyses**

To investigate the first hypothesis of this study, repeated measures ANOVA analyses were conducted on HADS scores across the four timepoints for participants who completed post-intervention measures at T<sub>3</sub> (n=33). As predicted, significant reductions in HADS scores were found, with large effect sizes (Table 4). Post-hoc comparisons in Table 5 indicated that there was no change in HADS scores during the control period (T<sub>1</sub>-T<sub>2</sub>), but found significant change in scores between pre- and post-intervention (T<sub>2</sub>-T<sub>3</sub>) with no significant difference between post-intervention and follow-up scores (T<sub>3</sub>-T<sub>4</sub>). Overall, this suggests that psychological distress reduced following intervention, and that these effects were maintained at 3-month follow-up.

To control for a possible bias effect of excluding those who did not complete post-intervention measures, data was also analysed on an ITT basis with the conservative assumption that post treatment scores deteriorated to baseline levels (n=43). These results supported the completers analyses, with significant reductions in HADS scores with medium effect sizes (Table 6). Post-hoc comparisons in Table 7 also highlighted no change in HADS scores during the control period (T<sub>1</sub>-T<sub>2</sub>), but significant reductions

in scores between pre- and post-intervention (T<sub>2</sub>-T<sub>3</sub>) with no significant difference between post-intervention and follow-up scores (T<sub>3</sub>-T<sub>4</sub>). Overall, this further supports the hypothesis that psychological distress reduced following intervention, and that these effects were maintained at 3-month follow-up.

**Table 2: Participant characteristics**

Characteristic	Completers (n=43)	Non-completers (n=10)	p
Mean age in years (SD)	49.32 (12.17)	52.67 (16.93)	0.490 <sup>t</sup>
Mean LTC duration in months (SD)	145.05 (118.64)	122.33 (157.29)	0.627 <sup>t</sup>
Gender (%)	30 female (69.77%) 13 male (30.23%)	6 female (60.00%) 4 male (40.00%)	0.709 <sup>PC</sup>
Ethnic (%)			0.848 <sup>PC</sup>
White	38 (88.37%)	7 (70.00%)	
Mixed	1 (2.33%)	0 (0.00%)	
Missing	4 (9.30%)	3 (30.00%)	
Employment status (%)			0.453 <sup>FE</sup>
Employed	15 (34.88%)	2 (20.00%)	
Student	1 (2.33%)	0	
Unemployed	15 (34.88%)	3 (30.00%)	
Retired	8 (18.60%)	4 (40.00%)	
Missing	4 (9.30%)	1 (10.00%)	
Marital status (%)			0.654 <sup>FE</sup>
Married	25 (58.14%)	5 (50.00%)	
Co-habiting	8 (18.60%)	3 (30.00%)	
Single	7 (16.28%)	1 (10.00%)	
Relationship	2 (4.65%)	0	
Widowed	1 (2.33%)	1 (10.00%)	
Physical health condition (%)			0.321 <sup>FE</sup>
Chronic pain	13 (30.23%)	2 (20.00%)	
Neurological	9 (20.93%)	1 (10.00%)	
Diabetes	5 (11.63%)	2 (20.00%)	
Bowel	5 (11.63%)	1 (10.00%)	
Osteological	2 (4.65%)	0	
Renal	3 (6.98%)	0	
Cardiological	1 (2.33%)	2 (20.00%)	
Respiratory	0	1 (10.00%)	
Arthritis	1 (2.33%)	0	
Other	4 (9.30%)	1 (10.00%)	

**NOTE: t=t-test; PC=Pearson Chi-square; FE=Fisher's Exact test.**



**Table 3: Characteristics at baseline**

	Completers n= 43 (Mean (SD))	Non-Completers n=10 (Mean (SD))	p
HADS Depression	10.51 (4.35)	10.10 (2.77)	0.711
HADS Anxiety	12.91 (4.31)	13.40 (2.07)	0.599
AAQ-II	34.98 (10.34)	32.78 (9.59)	0.561
VQ Progress	13.71 (7.24)	13.50 (5.08)	0.932
VQ Obstruction	21.21 (6.18)	19.00 (4.14)	0.289
BIPQ	58.57 (17.94)	52.40 (7.82)	0.295
SF36 Physical	40.47 (32.47)	34.17 (23.40)	0.566
SF36 Physical Limits	12.80 (25.69)	8.33 (12.50)	0.615
SF36 Emotional Limits	17.89 (26.97)	22.22 (33.33)	0.677
SF36 Fatigue	22.56 (16.31)	31.00 (23.66)	0.307
SF36 Emotions	42.42 (19.87)	46.40 (18.40)	0.566
SF36 Social	31.25 (23.30)	36.11 (28.26)	0.587
SF36 Pain	32.50 (25.82)	30.83 (25.40)	0.861
SF36 General	21.19 (17.43)	29.00 (23.07)	0.236

### Secondary Analyses

Health status measures were also analysed, both for completers and using ITT. No significant change was found in illness perceptions (BIPQ) or health status (SF-36) using either approach to analysis, with change detected in only the physical limitations, emotional limitations and emotions domains of the SF-36 (Tables 4 and 6). However, these findings should be interpreted with caution given the large amount

of variance in SF-36 scores. Overall, this suggests that limitations to daily living improved following intervention, but that improvements in this and psychological distress occurred without improvements in overall health status or cognitive evaluation of health problems.

### **Process Analyses**

Analyses also suggested that both obstruction and progress VQ scores significantly changed over time, for both completers and ITT analysis with small to medium effect sizes (Tables 4 and 6). Post-hoc comparisons for progress scores indicated a significant improvement from pre- to post-intervention ( $T_2$ - $T_3$ ) with no change in the control period ( $T_1$ - $T_2$ ) or follow-up period ( $T_3$ - $T_4$ ) for completers and ITT analyses (Table 5 & 7). However, comparisons for completers on the obstruction scale indicated a statistically significant improvement during the control period ( $T_1$ - $T_2$ ), but a non-significant improvement from pre- to post-intervention ( $T_2$ - $T_3$ ) that continued into the follow-up period ( $T_3$ - $T_4$ ). Further, under ITT analyses, these findings reduced, with no significant differences between timepoints found (Table 7). This suggests a general effect of time on VQ scores, but that the effect was a general trend rather than an effect relating to specific time periods. Taken together, this evidence gives preliminary support for valued living improvements following intervention.

Measures of psychological flexibility were also subjected to completers and ITT analyses. Results indicated a narrowly non-significant overall effect and small effect size for the AAQ-II measure in completers analyses, with this reducing further for ITT data (Tables 4 & 6). Inspection of post-hoc comparisons highlights a significant

improvement in AAQ-II scores between pre- and post-intervention ( $T_2$ - $T_3$ ; see Table 5 & 7), with no change in the control period ( $T_1$ - $T_2$ ) or follow-up period ( $T_3$ - $T_4$ ). Overall, this suggests a more complex effect for this measure of psychological inflexibility, but that there was some change in this variable post-intervention.

### **Mediation Analyses**

In order to assess whether changes in these process measures mediated change in the total HADS scores from pre- to post-intervention ( $T_2$ - $T_3$ ), a within-subjects mediation analysis was conducted as recommended by Judd, Kenny and McClelland (2001). Judd and colleagues propose that a number of assumptions must first be met in order to complete mediation analysis on a within-subjects study.

Firstly, there must be significant change between timepoints for both process and outcome variables. The findings reported in Table 7 indicate this is true for VQ Progress and psychological flexibility measures (AAQ-II), but not VQ Obstruction scores. Secondly, all measures must be scaled in the same direction, so that increases in outcome scores correspond to increases in process scores. The VQ Progress scale was reversed so that reduced scores indicated improvements in valued living.

**Table 4: Repeated measures ANOVA for pre-post completers using LOCF**

N=33		T <sub>1</sub> Baseline	T <sub>2</sub> Pre	T <sub>3</sub> Post	T <sub>4</sub> Follow-up	F	p	Effect size $\eta_p^2$
HADS	Depression	11.27 (4.09)	11.45 (4.09)	9.56 (4.89)	9.23 (4.82)	9.93	<0.001	.237
	Anxiety	13.21 (3.95)	13.43 (3.52)	11.92 (4.10)	11.49 (3.61)	7.266	0.001 <sup>g</sup>	.185
	Total	24.48 (7.13)	24.88 (6.93)	21.48 (8.59)	20.72 (7.68)	12.725	0.000 <sup>h</sup>	.285
AAQ-II		36.16 (9.04)	35.72 (9.50)	31.61 (9.29)	33.48 (14.78)	3.043	0.056 <sup>g</sup>	.087
VQ	Obstruction	22.40 (5.54)	20.35 (5.50)	19.06 (7.53)	17.99 (6.95)	6.033	0.002 <sup>h</sup>	.159
	Progress	12.23 (6.62)	13.26 (7.05)	16.19 (7.38)	16.29 (7.26)	6.393	0.001	.167
BIPQ		60.02 (19.88)	57.39 (10.07)	53.73 (11.48)	52.85 (11.70)	3.259	0.061 <sup>g</sup>	.092
SF36	Physical	38.94 (29.76)	34.01 (28.52)	36.97 (28.14)	35.91 (28.12)	1.200	0.312 <sup>h</sup>	.036
	Physical Limits*	9.11 (17.20)	4.77 (13.17)	21.97 (17.85)	21.97 (33.52)	11.507	0.009	.032
	Emotional Limits*	14.22 (23.25)	15.50 (30.04)	21.35 (16.88)	38.38 (42.59)	12.907	0.005	.038
	Fatigue*	22.73 (15.96)	21.97 (17.85)	21.97 (32.93)	28.18 (21.71)	5.612	0.132	.007
	Emotions	41.33 (19.64)	43.88 (20.38)	48.88 (19.74)	50.30 (19.82)	4.171	0.008	.115
	Social	29.59 (20.64)	29.21 (24.20)	37.11 (25.67)	37.50 (28.47)	2.990	0.052 <sup>g</sup>	.085
	Pain	33.27 (24.59)	25.83 (21.88)	30.78 (24.37)	31.59 (23.67)	2.887	0.050 <sup>h</sup>	.083
General*		20.86 (16.52)	21.35 (16.88)	23.14 (15.06)	25.15 (18.31)	2.416	0.491	<.001

<sup>g</sup> Greenhouse-geisser adjusted significance levels used due to sphericity violation, where epsilon<0.75

<sup>h</sup> Huyhn-Felder adjusted significance levels used due to sphericity violation, where epsilon>0.75

\* Friedman's ANOVA used as non-normal distribution, with  $r^2$  calculations for effect sizes

NOTE: HADS=Hospital Anxiety and Depression Scale; AAQ-II=Acceptance and Action Questionnaire-II; VQ=Valuing Questionnaire; SF36=Rand Short Form 36

**Table 5: Post-hoc comparisons (pre-post completers) using LOCF**

		T <sub>1</sub> vs T <sub>2</sub>		T <sub>2</sub> vs T <sub>3</sub>		T <sub>3</sub> vs T <sub>4</sub>	
N=33		MDiff	$\eta_p^2$	MDiff	$\eta_p^2$	MDiff	$\eta_p^2$
HADS	Depression	-0.178	.006	1.888	.268**	0.333	.016
	Anxiety	-0.215	.007	1.509	.210**	0.424	.031
	Total	-0.393	.012	3.398	.328***	0.758	.031
AAQ-II		0.435	.004	4.116	.294**	-1.879	.026
VQ	Progress	-1.023	.028	-2.930	.178*	-0.106	.000
	Obstruction	2.052	.139*	1.286	.054	1.070	.033
BIPQ		2.628	.018	3.662	.158*	0.878	.020
SF36	Physical	4.933	.090	-2.963	.049	1.061	.011
	Physical Limits*	4.342	.008	-17.203	.058**	0.000	<.001
	Emotional Limits*	-1.281	<.001	-17.837	.036*	-5.051	.005
	Fatigue*	0.758	.005	-7.869	.024*	1.662	.003
	Emotions	-2.545	.029	-5.000	.112	-1.424	.010
	Pain	7.436	.246*	-4.948	.088	-0.810	.006
	Social	0.379	.000	-7.895	.164*	-0.391	.000
General		-0.491	.005	-1.790	.005	-2.012	.002

\* p < .05; \*\* p < .01; \*\*\* p < .001

\* Post-hoc comparisons used Wilcoxon signed-rank test as non-normal distribution, with  $r^2$  calculations for effect sizes  
 NOTE: HADS=Hospital Anxiety and Depression Scale; AAQ-II=Acceptance and Action Questionnaire-II;  
 VQ=Valuing Questionnaire; SF36=Rand Short Form 36

**Table 6: Repeated measures ANOVA (ITT)**

n=43		<b>Baseline Mean (SD)</b>	<b>Pre Mean (SD)</b>	<b>Post Mean (SD)</b>	<b>Follow-up Mean (SD)</b>	<b>F</b>	<b>p</b>	<b>Effect size <math>\eta_p^2</math></b>
HADS	Depression	10.51 (4.34)	10.89 (4.29)	9.43 (4.77)	9.32 (4.54)	5.772	0.001	.121
	Anxiety	12.91 (4.31)	13.10 (3.78)	11.94 (4.16)	11.77 (3.55)	4.954	0.005 <sup>h</sup>	.105
	Total	23.42 (7.82)	23.98 (7.33)	21.37 (8.40)	21.09 (7.35)	7.643	0.000 <sup>h</sup>	.154
AAQ-II		35.17 (10.29)	35.48 (9.25)	32.33 (9.17)	34.86 (13.54)	1.998	0.136 <sup>g</sup>	.045
VQ	Progress	13.74 (7.07)	14.48 (7.41)	16.73 (7.38)	16.33 (7.49)	4.588	0.004	.098
	Obstruction	21.21 (6.11)	20.43 (5.29)	19.44 (6.97)	18.34 (5.91)	3.438	0.025 <sup>h</sup>	.076
BIPQ		58.80 (17.79)	57.02 (9.63)	54.21 (10.77)	53.93 (10.27)	2.541	0.101 <sup>g</sup>	.057
SF36	Physical	40.47 (32.47)	35.40 (32.13)	37.67 (31.80)	36.51 (31.74)	2.203	0.100 <sup>h</sup>	.050
	Physical Limits*	12.80 (25.07)	9.70 (24.33)	22.90 (34.73)	21.16 (34.36)	9.688	0.021	.024
	Emotional Limits*	17.89 (26.32)	18.53 (32.59)	32.21 (41.52)	32.99 (42.47)	9.293	0.026	.022
	Fatigue*	22.56 (16.31)	24.88 (19.59)	30.92 (22.34)	28.72 (20.56)	5.729	0.126	.008
	Emotions	42.42 (19.87)	44.84 (21.16)	48.67 (20.62)	48.65 (21.18)	3.128	0.028	.069
	Social	29.69 (21.27)	28.82 (24.06)	34.87 (25.52)	36.05 (26.89)	2.772	0.061 <sup>g</sup>	.062
	Pain	32.51 (25.20)	28.90 (24.28)	32.69 (25.65)	32.15 (25.32)	1.343	0.263	.031
	General*	12.62 (17.12)	22.31 (18.37)	23.69 (17.06)	24.53 (19.30)	1.320	0.724	.002

<sup>g</sup> Greenhouse-geisser adjusted significance levels used due to sphericity violation, where epsilon<0.75

<sup>h</sup> Huyhn-Felder adjusted significance levels used due to sphericity violation, where epsilon>0.75

\* Friedman's ANOVA used as non-normal distribution, with  $r^2$  calculations for effect sizes

NOTE: HADS=Hospital Anxiety and Depression Scale; AAQ-II=Acceptance and Action Questionnaire-II; VQ=Valuing Questionnaire; SF36=Rand Short Form 36

**Table 7: Post-hoc comparisons (ITT)**

N=43		T <sub>1</sub> vs T <sub>2</sub>		T <sub>2</sub> vs T <sub>3</sub>		T <sub>3</sub> vs T <sub>4</sub>	
		MDiff	$\eta_p^2$	MDiff	$\eta_p^2$	MDiff	$\eta_p^2$
HADS	Depression	-0.369	.023	1.449	.206**	0.109	.001
	Anxiety	-0.118	.006	1.158	.161**	0.167	.004
	Total	-.558	.025	2.607	.252**	.276	.003
AAQ-II		-0.317	.002	3.159	.225**	-2.535	.050
VQ	Progress	-0.739	.015	-2.249	.137*	0.395	.004
	Obstruction	0.784	.018	0.987	.042	1.100	.031
BIPQ		1.784	.010	2.810	.121*	0.275	.002
SF36	Physical	5.065	.109*	-2.274	.038	1.163	.010
	Physical Limits*	3.107	.008	-13.202	.058**	1.744	<.001
	Emotional Limits*	-0.639	<.001	-13.689	.036*	-0.775	<.001
	Fatigue*	-2.326	.005	-6.040	.024*	2.202	.002
	Emotions	-2.419	.024	-3.838	.086	0.024	.000
	Pain	3.614	.003	-3.797	.126	0.541	.004
	Social	0.872	.060	-6.059	.068*	-1.172	.002
	General	-.696	.005	-1.374	.005	-0.847	<.001

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

\* Post-hoc comparisons used Wilcoxon signed-rank test as non-normal distribution, with  $r^2$  calculations for effect sizes

NOTE: HADS=Hospital Anxiety and Depression Scale; AAQ-II=Acceptance and Action Questionnaire-II; VQ=Valuing Questionnaire; SF36=Rand Short Form 36

As shown in Table 8, AAQ-II significantly predicted HADS scores at T<sub>2</sub> ( $\beta=0.554$ ,  $p<0.001$ ) and T<sub>3</sub> ( $\beta=0.728$ ,  $p<0.001$ ). Further, the mean difference for AAQ-II (T<sub>2</sub>-T<sub>3</sub>) significantly predicted the mean difference in HADS score for the same period ( $\beta=0.388$ ,  $p=0.004$ ), over the mean sum in AAQ-II (T<sub>2</sub>+T<sub>3</sub>) ( $\beta=0.036$ ,  $p<0.289$ ), indicating that psychological flexibility mediated the observed change in HADS scores in the ITT analyses.

A similar pattern was found for VQ Progress scores, which significantly predicted HADS scores at T<sub>2</sub> ( $\beta=0.704$ ,  $p<0.001$ ) and T<sub>3</sub> ( $\beta=0.833$ ,  $p<0.001$ ). The mean

difference for VQ Progress between these timepoints (T2-T3) also significantly predicted the mean difference in HADS score for the same period ( $\beta=0.428$ ,  $p=0.007$ ), over the mean sum of VQ Progress (T2+T3) ( $\beta=0.052$ ,  $p<0.161$ ), indicating that progress with valued living behaviours also mediated the observed change in HADS scores in the ITT analyses.



**Table 8: Mediation analyses for AAQ-II and VQ Progress outcomes, for pre to post ITT data**

Dependent		Bootstrapped standardized beta coefficients ( $\beta$ )						
Variable	Predictor	R <sup>2</sup>	F Change	p	B	t	p $\beta$	Confidence interval
T2 HADS	T2 AAQ-II	0.554	53.209	<.001	0.595	7.294	<.001	0.461 - 0.790
T3 HADS	T3 AAQ-II	0.622	70.030	<.001	0.728	0.067	<.001	0.599 - 0.866
T3-T2 HADS	1) T3-T2 AAQ-II	0.235	13.926	.001	0.388	3.748	.004	0.144 – 0.596
	2) T3+T2 AAQ-II	0.236	1.042	.314	0.036	1.021	.289	-0.44 – 0.093
T2 HADS	T2 VQ Progress	0.495	42.096	<.001	0.704	6.488	<.001	0.521 - 0.887
T3 HADS	T3 VQ Progress	0.524	47.242	<.001	0.833	6.873	<.001	0.618 - 1.085
T3-T2 HADS	1) T3-T2 VQ Progress	0.271	16.590	<.001	0.428	4.100	.007	0.159 - 0.695
	2) T3+T2 VQ Progress	0.278	1.426	.239	0.052	1.194	.161	-0.14 - 0.130

## Discussion

The primary aim of this study was to develop and evaluate the effectiveness of an ACT group intervention for a physically and psychologically transdiagnostic sample of patients living with chronic illness. Overall, the results support the use of this intervention and suggest that it is effective in reducing psychological distress. This conclusion was supported by medium to large effect sizes for these improvements and are broadly in line with similar research in clinical health outpatient settings (e.g. Vowles, Wetherell & Sorell, 2009; Gregg *et al.*, 2007; McCracken, Sato & Taylor, 2013). There were similar benefits in the extent to which participants felt limited by their health problems, but limited change in cognitive evaluation of health problems and self-rated health status. This is consistent with the therapeutic aims of the intervention, with psychological improvements occurring in the context of no or limited change in health problems.

In line with previous research, improvements in general psychological flexibility and progress with valued living mediated reductions in psychological distress (Vowles *et al.*, 2014; Gregg *et al.*, 2007; Ferreira, 2011; Lundgren, Dahl & Hayes, 2008). Many clinical health studies use illness-specific adaptations of psychological flexibility, rather than the general measure used in this study (e.g. diabetes: Gregg *et al.*, 2007; chronic pain: McCracken, Vowles & Eccleston, 2004; tinnitus: Westin, Hayes & Andersson, 2008). Both general and illness-specific psychological flexibility have correlations with psychological distress, with general measures explaining additional variance independent of illness-specific measures (McCracken & Zhao-O'Brien, 2010). Yet most research has used illness-specific measures of psychological

flexibility in mediation analysis. A useful development for the future, therefore, might be a general an adapted version of the AAQ that combines both general psychological flexibility and questions specific to health conditions, while maintaining a physically transdiagnostic stance to the latter.

While progress in valued living was highlighted as a mediator in the present study, it was somewhat surprising that obstructions to valued living did not also, particularly as this scale has strong correlations with psychological flexibility (Smout *et al.*, 2014). One possible explanation for this is the qualitative difference between the progress and obstruction scales of the VQ. Whereas progress measures advances in behavior change, the obstruction scale assesses ability to overcome barriers to progress. As the intervention was relatively brief, it's likely that such obstructions continued to be challenging for participants. Further, this measure is novel and not health specific, and the authors understand this to be the first trial of this measure in such a setting. As such, it may not have been sensitive to change with this population.

### **Strengths and limitations**

It is worth noting the limitations of this study. Although controlled, the present study had a modest sample size and was conducted as a pilot study without an active treatment comparison. Yet the significant findings warrant further investigation. The study relied on self-report measures which have a number of drawbacks, such as respondent fatigue and socially desirable responding (Hess, Hensher & Daly, 2012; Helmes and Holden, 2003). They do however provide a practical, cost-effective way of measuring outcome and process. It would be useful for future research to use a

broader but consistent range of measures. This should include aspects of general and health-specific psychological flexibility, as well as a range ACT process-specific measures, such as the VQ and Cognitive Fusion Questionnaire (Gillanders *et al.*, 2014).

It is worth noting that participants were not assessed for diagnostic thresholds in the present study, and as such, baseline levels of psychological distress were relatively low, with some participants reporting below-threshold symptoms of anxiety and depression. Diagnostic thresholds in a transdiagnostic group present obvious challenges, with different disorders having very different parameters for caseness. This context of low baseline distress was not, however, a barrier to significant reductions in distress, and is consistent with how clinical settings may accept referrals to groups.

The naturalistic approach of this study, operating in a clinical setting, is one of its key strengths and facilitates generalizability of the findings. The use of a controlled repeated measures design allowed conclusions to be drawn from a sample size that was realistic in a clinical setting but would have been insufficient for a randomized controlled study.

### **Theoretical implications**

These findings are important in the context of the ongoing debate between the use of diagnosis-specific and transdiagnostic approaches to research and psychological interventions. Health services are often organised by diagnosis, which can be a barrier

to implementing physically or psychologically transdiagnostic approaches (Mansell *et al.*, 2009). So it is encouraging then that this transdiagnostic study was effectively integrated under such constraints. Much of the transdiagnostic research to date has focused on common processes, in particular which factors relate to a range of major psychological disorder categories (Levin *et al.*, 2014). While this is important in setting the context for this work, it has become fragmented with a large number of inter-related processes implicated in a broad range of conditions (Aldao, Nolen-Hoeksema & Schweizer, 2010; Mansell *et al.*, 2009). In contrast to this, psychological inflexibility as a transdiagnostic process has been described as a continuum or dimension that could contribute to most psychological disorders (Hayes *et al.*, 2011), with a growing body of research increasingly supporting this parsimonious approach (Levin *et al.*, 2014; Brown & Barlow, 2009).

However, this is not to say that diagnostic approaches are not also without value. Trials comparing diagnosis-specific interventions with physically or psychologically transdiagnostic ones are lacking. Transdiagnostic approaches need not be a replacement for diagnosis-specific interventions, and so are not required to outperform them (Clark, 2009). However, such comparisons would advance our understanding of when this approach is sufficient, and when a more specific approach is superior. Basic science findings are likely to more readily translate into diagnostic-specific interventions, and so allowing both approaches to complement each other is likely to be advantageous (Craske, 2012).

## **Clinical implications**

The benefits to using a physically transdiagnostic group approach in clinical health settings is wide ranging. As well as improvements in psychological distress and functioning, feedback from participants has been positive, suggesting high levels of treatment acceptability. This is an important aspect of services, and a more formal qualitative exploration of participants' experiences would allow this to be explored further.

One important consideration in setting up a transdiagnostic group is agreeing the parameters for inclusion. Too broad a range in terms of severity of psychological difficulties risks polarization of group members, which can be an unhelpful dynamic for therapy (Söchting, 2014). The range of physical conditions in a group is also likely to be an important factor for consideration. While there are many commonalities across living with different illnesses, some individual or diagnostic features are less common. For example, patients with terminal illness are likely to face qualitatively different challenges to non-terminal chronic illness. For others, such as Human Immunodeficiency Virus (HIV) and Hepatitis C, stigma is likely to be a factor in illness-associated distress (Vanable *et al.*, 2006). Introducing such aspects into a mixed group could highlight differences between participants' and interfere with the group process.

Experience of this trial suggests that a transdiagnostic approach might not be appropriate for other reasons. Physical conditions, such as chronic pain and oncology

services, have more established group interventions available that can be tailored to be either diagnosis-specific or specific to a broad diagnostic category. As Mansell *et al.* (2009) observes, there is little that a transdiagnostic approach can offer over and above tailored protocols here. There is also a danger of focusing on the commonalities across disorders at the expense of ignoring differences between diagnoses, which could be important targets for treatment and should be considered in a transdiagnostic intervention (Craske, 2012). Future research research could explore characteristics of patients or conditions that are most likely to benefit from a transdiagnostic approach.

## **Conclusions**

We would argue that transdiagnostic group psychological interventions can play an important role in services for people living with long term physical health conditions. Further research could help identify which groups of patients are most likely to benefit from this approach and which would be more suitable for a diagnosis-specific or broad diagnostic category intervention. This study comes at a time when there is increased interest and need to offer services to the population of people with chronic illness but with limited resources to allow for this extension (Department of Health, 2012b). Clearly these findings are highly relevant and topical.

## References

- Alam, R., Sturt, J., Lall, R. and Winkley, K. (2008). An updated meta-analysis to assess the effectiveness of psychological interventions delivered by psychological specialists and generalist clinicians on glycaemic control and on psychological status. *Patient Education and Counselling*, 75(1), 25–36.
- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review*, 30, 217-237.
- Barlow, D.H., Allen, L.B. and Choate, M.L. (2004). Toward a unified treatment for emotional disorders. *Behavior Therapy*, 35, 205-230.
- Barnett, K., Mercer, S.W., Norbury, M., Watt, G., Wyke, S., Guthrie, B. (2012). Epidemiology of multimorbidity and implications for health care, research, and medical education: A cross-sectional study. *Lancet*, 380(9836), 37-43.
- Bieling, P.J., McCabe, R.E., Antony, M.M. (2006). *Cognitive Behavioral Therapy in Groups*. Guilford Press.
- Bjelland, I., Dahl, A.A., Haug, T.T. and Neckelmann, D. (2002). The validity of the Hospital Anxiety and Depression Scale: An updated literature review. *Journal of Psychosomatic Research*, 52(2), 69-77.
- Bond, F.W., Hayes, S.C., Baer, R.A., Carpenter, K.M., Guenole, N., Orcutt, H.K., Waltz, T. and Zettle, R.D. (2011). Preliminary Psychometric Properties of the Acceptance and Action Questionnaire–II: A Revised Measure of Psychological Inflexibility and Experiential Avoidance. *Behavior Therapy*, 4, 676-688.



- Brassington, L., Ferreira, N., Yates, S. and Gillanders, D. (under review). A systematic review of group psychological therapy for people with chronic physical illness. *Journal of Behavioral Medicine*.
- Broadbent, E., Petrie, K.J., Main, J. and Weinman, J. (2006). The Brief Illness Perception Questionnaire. *Journal of Psychosomatic Research*, 631-637.
- Brown, T. A., & Barlow, D. H. (2009). A proposal for a dimensional classification system based on the shared features of the DSM-IV anxiety and mood disorders: Implications for assessment and treatment. *Psychological Assessment*, 21, 256–271
- Burlingame, G. M., MacKenzie, K. R., & Strauss, B. (2004). Small group treatment: evidence for effectiveness and mechanisms of change. *Bergin & Garfield's Handbook of psychotherapy and behavior change*, 5, 647-696.
- Butler, A.C., Chapman, J.E., Forman, E.M. and Beck, A.T. (2006). The empirical status of cognitive-behavioral therapy: A review of meta-analyses. *Clinical Psychology Review*, 26(1),17-31.
- Chavance, M. (2004). Handling Missing Items in Quality of Life Studies. *Communications in Statistics - Theory and Methods*, 33(6), 1371-1383.
- Clark, D.A. (2009). Cognitive Behavioral Therapy for Anxiety and Depression: Possibilities and Limitation of a Transdiagnostic Perspective. *Cognitive Behavior Therapy*, 38 (Supp 1), 29-34.
- Clarke, S. and Remington, B. (2014). The development and initial validation of the Cognitive Fusion Questionnaire. *Behavior Therapy*, 45(1), 83-101.

Craske, M.G. (2012). Transdiagnostic treatment for anxiety and depression. *Depression and anxiety*, 29(9), 749-756.

Department of Health (2012a). Report. Long-term conditions compendium of Information: 3rd edition. Department of Health, UK.

Department of Health (2012b). A Mandate from the government to the NHS Commissioning Board: April 2013 to March 2015. Department of Health, UK.

Accessed at

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/256497/13-15\\_mandate.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/256497/13-15_mandate.pdf) on 21st March 2015.

Drossman, D.A., Toner, B.B., Whitehead, W.E., Diamant, N.E., Dalton, C.B., Duncan, S., Emmott, S., Proffitt, V., Akman, D., Frusciante, K., Le, T., Meyer, K., Bradshaw, B., Mikula, K., Morris, C.B., Blackman, C.J., Hu, Y., Li, J.Z., Koch, G.G. and Bagdiwala S.I. (2003). Cognitive-behavioral therapy versus education and desipramine versus placebo for moderate to severe functional bowel disorders. *Gastroenterology*, 2003, 125(1), 19-31.

Duarte, P.S., Miyazaki, M.C., Blay, S.L. and Sesso, R. (2009). Cognitive behavioral group therapy is an effective treatment for major depression in haemodialysis patients. *Kidney International*, 76, 414-421.

Elliot, M., Salt, H., Dent, J., Stafford, C. and Schiza, A. (2014). Heart2Heart: An integrated approach to cardiac rehabilitation and CBT. *British Journal of Cardiac Nursing*, 9(10), 501-507.

- Fairburn, C.G., Cooper, Z. and Shafran, R. (2003). Cognitive behaviour therapy for eating disorders: A “transdiagnostic” theory and treatment. *Behaviour Research and Therapy*, 41(5), 509-528.
- Faul, F., Erdfelder, E., Lang, A.G. and Buchner, A. (2007). G\*Power 3: a flexible statistical power analysis program for the social, behavioral and biomedical sciences. *Behavior Research Methods*, 39(2), 175-191.
- Ferreira, N. (2011). Investigating the role of psychological flexibility and the use of an acceptance and commitment therapy based intervention in Irritable Bowel Syndrome. Unpublished thesis, University of Edinburgh, UK.
- Ferreira, N. and Gillanders, D.T. (2012). *Living with IBS*. Sheldon press, London.
- Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). London: Sage Publications.
- Forman, E.M., Herbert, J.D., Moitra, E., Yeomans, P.D. and Geller, P.A. (2007). A randomized controlled effectiveness trial of Acceptance and Commitment Therapy and Cognitive Therapy for anxiety and depression. *Behavior Modification*, 31(6), 772-799.
- Gillanders, D.T., Bolderston, H., Bond, F.W., Dempster, M., Flaxman, P.E., Campbell, L., Kerr, S., Tansey, L., Noel, P., Ferenbach, C., Masley, S., Roach, L., Lloyd, D., May, L., Clarke, S. and Remington, B. (2014). *Behavior Therapy*, 45(1), 83-101.
- Grumbach, K. (2003). Chronic illness, comorbidities and the need for medical generalism. *Annals of Family Medicine*, 1, 4-7.

Gregg, J. A., Callaghan, G. M., Hayes, S. C., & Glenn-Lawson, J. L. (2007).

Improving diabetes self-management through acceptance, mindfulness, and values: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 75(2), 336-343.

Hayes, S. C., Barnes-Holmes, D., & Roche, B. (Eds.). (2001). Relational Frame Theory: A Post-Skinnerian account of human language and cognition. New York: Plenum Press.

Post-Skinnerian account of human language and cognition. New York: Plenum Press.

Hayes, S.C., Luoma, J.B., Bond, F.W., Masuda, A. and Lillis, J. (2006). Acceptance and Commitment Therapy: Model, processes and outcomes. *Behaviour Research and Therapy*, 44(1), 1-25.

Hayes, S.C., Strosahl, K.D. and Wilson, K.G. (2011). Acceptance and Commitment Therapy: The Process and Practice of Mindful Change. The Guilford Press, New York, NY (2011).

Helmes, E. and Holden, R.R. (2003). The construct of social desirability: one or two dimensions? *Personality and individual differences*, 34(6), 1015-1023.

Hess, S., Hensher, D.A. and Daly, A. (2012). Not bored yet – Revisiting respondent fatigue in stated choice experiments. *Transportation Research Part A: Policy and Practice*, 46(3), 626-644.

Hynninen, M.J., Bjerke, N., Pallesen, S., Bakke, P.S., Nordhus, I.H. (2010). A randomised controlled trial of cognitive behavioral therapy for anxiety and depression in COPD. *Respiratory Medicine*, 104, 986-994.

- Hoffman, C., Rice, D. and Sung, H. (1996). Persons with chronic conditions: their prevalence and costs. *JAMA*, 276(18), 1473-1479.
- Honarmand, K. and Feinstein, A. (2009). Validation of the Hospital Anxiety and Depression Scale for use with multiple sclerosis patients. *Multiple Sclerosis Journal*, 15(12), 1518-1524.
- Johnston, M., Pollard, B. and Hennessey, P. (2000). Construct validation of the hospital anxiety and depression scale with clinical populations. *Journal of Psychosomatic Research*, 48(6), 579-584.
- Judd, C.M., Kenny, D.A. and McClelland, G.H. (2001). Estimating and testing mediation and moderation in within-subjects designs. *Psychological Methods*, 6(2), 115-134.
- Løchting, I., Garratt, A.M., Storheim, K., Werner, E.L. and Grotle, M. (2013). Evaluation of the Brief Illness Perception Questionnaire in Sub-Acute and Chronic Low Back Pain Patients: Data Quality, Reliability and Validity. *Journal of Pain Relief*, 2(3).
- Levin, M.E., MacLane, C., Daflos, S., Seeley, J.R., Hayes, S.C., Biglan, A. and Pistorello, J. (2014). Examining psychological inflexibility as a transdiagnostic process across psychological disorders. *Journal of Contextual Behavioral Science*, 3, 155-163.
- Lundgren, T., Dahl, J., Melin, L., & Kies, B. (2006). Evaluation of acceptance and commitment therapy for drug refractory epilepsy: A randomized controlled trial in South Africa—a pilot study. *Epilepsia*, 47(12), 2173–2179.

- Mansell, W., Harvey, A., Watkins, E., & Shafran, R. (2009). Conceptual foundations of the Transdiagnostic Approach to CBT. *Journal of Cognitive Psychotherapy; An International Quarterly*, 23(1), 13-27.
- Markowitz, J. C., Kocsis, J. H., Fishman, B., *et al.* (1998) Treatment of depressive symptoms in human immunodeficiency virus-positive patients. *Archives of General Psychiatry*, 55, 452-457.
- McCracken, L.M. (1998). Learning to live with the pain: acceptance of pain predicts adjustment in persons with chronic pain. *Pain*, (74), 21-27.
- McCracken, L.M., Sato, A. and Taylor, G.J. (2013). A trial of a brief group-based form of Acceptance and Commitment Therapy (ACT) for chronic pain in general practice: Pilot outcome and process results. *Journal of Pain*, 14(11), 1398-1406.
- McCracken, L.M., Vowles, K.E. and Eccleston, C. (2005). Acceptance-based treatment for persons with complex, long standing chronic pain: a preliminary analysis of treatment outcome in comparison to a waiting phase. *Behaviour Research and Therapy*, 43, 1335-1346.
- McCracken, L.M. and Zhao-O'Brien, J. (2010). General psychological acceptance and chronic pain: There is more to accept than the pain itself. *European Journal of Pain*, 14(2), 170-175.
- McEvoy, P.M. and Nathan, P. (2007). Effectiveness of Cognitive Behavior Therapy for Diagnostically Heterogenous Groups: A Benchmarking Study. *Journal of Consulting and Clinical Psychology*, 75(2), 344-350.

- McHorney, C.A., Ware, J.E., Lu, J.F. and Sherbourne, C.D. (1994). The MOS 36 item short-form health survey (SF-36): III. Tests of data quality, scaling assumptions, and validity among diverse patient groups. *Medical Care*, 32, 40-66.
- McLaughlin, K. A., & Nolen-Hoeksema, S. (2011). Rumination as a transdiagnostic factor in depression and anxiety. *Behaviour Research and Therapy*, 49, 186-193.
- McManus, F., Shafran, R. & Cooper, Z. (2010) What does a transdiagnostic approach have to offer the treatment of anxiety disorders? *The British journal of clinical psychology*, 49 (4), 491-505.
- Mohr, D. C., Boudewyn, A. C., Goodkin, D. E., *et al.* (2001) Comparative outcomes for individual cognitive-behavior therapy, supportive-expressive group psychotherapy, and sertraline for the treatment of depression in multiple sclerosis. *Journal of Consulting and Clinical Psychology*, 69, 942-94
- Morrison, N. (2001). Group cognitive therapy: treatment of choice or sub-optimal option? *Behavioural and Cognitive Psychotherapy*, 29(3), 311-332.
- Moussavi S, Chatterji S, Verdes E. (2007). Depression, chronic disease and decrements in health results from the World Health Surveys. *Lancet*, 370, 851–8.
- Mykletun, A., Stordal, E. & Dahl, A. (2001). Hospital Anxiety and Depression (HAD) scale: factor structure, item analyses and internal consistency in a large population. *British Journal of Psychiatry*, 179, 540-544.

- Naylor, C., Parsonage, M., McDaid, D., Knapp, M., Fossey, M. and Galea, A. (2012). *Long term conditions and mental health. The cost of co-morbidities*. The Kings Fund and Centre for Mental Health, London, UK.
- NHS Confederation (2012). Investing in emotional and psychological wellbeing for patients with long-term conditions. Accessed at <http://www.nhsconfed.org/~media/Confederation/Files/Publications/Documents/Investing%20in%20emotional%20and%20psychological%20wellbeing%20for%20patients%20with%20long-term%20conditions%2016%20April%20final%20for%20website.pdf> on 23<sup>rd</sup> March 2015.
- Norton, P.J. and Hope, D.A. (2005). Preliminary evaluation of a broad-spectrum cognitive-behavioral group therapy for anxiety. *Journal of Behavior Therapy and Experimental Psychiatry*, 36, 79-97.
- Rost, A.D., Wilson, K., Buchanan, E., Hildebrandt, M.J. and Mutch, D. (2012). Improving psychological adjustment among late-stage ovarian cancer patients: examining the role of avoidance in treatment. *Cognitive and Behavioral Practice*, 19, 508-517.
- Söchting I. (2014). *Cognitive Behavioural Group Therapy: Challenges and Opportunities*. Wiley.
- Spinhoven, P.H., Ormel, J., Sloekers, P.P.A., Kempen, G.I.J.M., Speckens, A.E.M. and Van Hemert, A.M. (1997). A validation study of the Hospital Anxiety and Depression Scale (HADS) in different groups of Dutch subjects. *Psychological Medicine*, 27, 363-370.



- Stafford, L., Berk, M. and Jackson, H.J. (2007). Validity of the Hospital Anxiety and Depression Scale and Patient Health Questionnaire-9 to screen for depression in patients with coronary artery disease. *General Hospital Psychiatry*, 29(5), 417-424.
- Taylor, S. and Clark, D.A. (2009). Transdiagnostic cognitive-behavioural treatments for mood and anxiety disorders: Introduction to the special issue. *Journal of Cognitive Psychotherapy*, 23(1), 3-5.
- Trento, M., Raballo, M., Trevisan, M., Sicuro, J., Passera, L., Cirio, L., Charrier, L., Cavallo, F., and Porta, M. (2012). A cross-sectional survey of depression, anxiety, and cognitive function in patients with type 2 diabetes. *Acta Diabetologica*, 49(3), 199-203.
- Tucker, M. and Oei, T.P.S. (2007). Is group more cost effective than individual cognitive behaviour therapy? The evidence is not solid yet. *Behavioral and Cognitive Psychotherapy*, 35(1), 77-91.
- Vanable, P.A., Carey, M.P., Blair, D.C. and Littlewood, R.A. (2006). Impact of HIV-Related Stigma on Health Behaviors and Psychological Adjustment Among HIV-Positive Men and Women. *AIDS and Behavior*, 10(5), 473-482.
- Vowles, Kevin E.; McCracken, Lance M. (2008). Acceptance and values-based action in chronic pain: A study of treatment effectiveness and process. *Journal of Consulting and Clinical Psychology*, Vol 76(3), 397-407.
- Vowles, K.E., Wetherell, J.L. and Sorrell, J.T. (2009). Testing acceptance, mindfulness and values-based action in chronic pain: Findings of two preliminary trials of an outpatient group-based intervention. *Cognitive and Behavioral Practice*, 16, 49-58.

- Vowles, K.E., Witkiewitz, K., Sowden, G. and Ashworth, J. (2014). Acceptance and Commitment Therapy for chronic pain: Evidence of mediation and clinically significant change following an abbreviated interdisciplinary program of rehabilitation. *The Journal of Pain*, 15(1), 101-113.
- Ware, J. E. and Sherbourne, C. D. (1992). The MOS 36-item short-form health survey (SF-36): I. Conceptual framework and item selection. *Medical Care*, 30, 473-483.
- Westin, V. Z., Schulin, M., Hesser, H., Karlsson, M., Noe, R. Z., Olofsson, U., Stalby, M., Wisung, G. & Andersson, G. (2011). Acceptance and Commitment Therapy versus Tinnitus Retraining Therapy in the treatment of tinnitus distress: A randomized controlled trial. *Behaviour Research and Therapy*, 49(11), 737-747.
- White, R.G., Gumley, A., McTaggart, J., Rattrie, L., McConville, D., Cleare, S., and Mitchell, G. (2011) A feasibility study of acceptance and commitment therapy for emotional dysfunction following psychosis. *Behaviour Research and Therapy*, 49(12), pp. 901-907.
- Whitfield, G. (2010). Group cognitive-behavioural therapy for anxiety and depression. *Advances in Psychiatric Treatment*, 16(3), 219-227.
- WHO (2002). Innovative care for chronic conditions: building blocks for action: Global report. World Health Organisation. Accessed at [http://www.who.int/chp/knowledge/publications/iccc\\_ch1.pdf](http://www.who.int/chp/knowledge/publications/iccc_ch1.pdf)
- Yalom, I. (1995). *The Theory and Practice of Group Psychotherapy* (4th edn). Basic Books.

Zigmond, A.S. and Snaith, R.P. (1983). The Hospital Anxiety and Depression Scale.  
*Acta Psychiatrica Scandinavica*, 67(6), 361-70.

## Appendix 1 Data Extraction Form

### General Information

Date of data extraction:

Coder (circle):

Trial (Study) Identifiers

Study/Article Number:

Author(s):

Title:

Journal:

Year:

Vol/Pages:

Type of Report: 1. Full report ☐ 2. Follow-up data only ☐ If 2 give study No of original \_\_\_\_\_

Location of study: 1. Europe ☐ 2. North America ☒ 3. Australia & NZ ☐ 4. \_\_\_\_\_

Other \_\_\_\_\_

Study \_\_\_\_\_

question(s)

### Participants

Source of sample:

1. Secondary care ☐
2. Primary care ☐
3. Volunteer / advert ☐
4. Other \_\_\_\_\_ ☐

Sampling strategy:

1. Random from specified pop. ☐
2. Convenience from specified pop. ☐
3. Consecutive referrals ☐
4. Not reported ☐

Method of treatment allocation computer \_\_\_\_\_

Total sample size before selection or attrition: \_\_\_\_\_

Number of males at start of trial: \_\_\_\_\_

Number entered into trial, after selection / refusal: \_\_\_\_\_

Number of females at start of trial: \_\_\_\_\_

Number of participants at end of treatment: \_\_\_\_\_

Mean age of total sample (to 2 d.p): \_\_\_\_\_

Number of participants at end of final follow-up: \_\_\_\_\_

SD of sample age: \_\_\_\_\_

\*\*\* If age not reported: note means, SD and N

Lowest age: \_\_\_\_\_

for each group. See reverse of sheet

Highest age: \_\_\_\_\_

Averaged years in education \_\_\_\_\_ If not reported note the page where details of education given

Work status of sample – give as much detail as possible:

Employed \_\_\_\_\_ Unemployed due to health \_\_\_\_\_ Unemployed due to other \_\_\_\_\_%

Mean years of health condition of sample: \_\_\_\_\_ or Median if reported \_\_\_\_\_

Diagnostic label for sample:

- |  |                                      |                                      |                                   |
|--|--------------------------------------|--------------------------------------|-----------------------------------|
| 1. Chronic pain (FIBRO) <input type="checkbox"/> | 2. Diabetes <input type="checkbox"/> | 3. Epilepsy <input type="checkbox"/> | 4. Osteo <input type="checkbox"/> |
| 5. Rheumatoid arthritis <input type="checkbox"/> | 6. Cardiac <input type="checkbox"/>  | 7. Kidney <input type="checkbox"/>   | 8. Other _____                    |

### Notes of on any other aspect of Sample that may need to be discussed

### Data for computing age of sample

Group1: Name _____	Mean _____	SD _____	N _____
Group2: Name _____	Mean _____	SD _____	N _____
Group3: Name _____	Mean _____	SD _____	N _____
Group4: Name _____	Mean _____	SD _____	N _____

Treatments \*\*\* Use separate sheet for each treatment in the trial including control group(s)\*\*\*

### Type and delivery details

Name of treatment as given by author: \_\_\_\_\_

Treatment Type:

1. CBT – multiple components ☐
2. Behaviour therapy ☐
3. Cognitive therapy ☐
4. Unimodal treatment ☐ name here \_\_\_\_\_
5. Waiting list control – no treatment ☐ i.e. no treatment given by health care

6. Waiting list -Treatment as usual available ☐ i.e. assigned as WL but TAU available  
 7. Treatment as usual control ☐ i.e. assigned to TAU  
 8. Education/bibliotherapy control ☐  
 9. Other \_\_\_\_\_

Treatment setting:

1. In-patient ☐ 2. Out-patient ☐ 3. Mixed ☐ Not reported ☐

Format of delivery – patients:

1. Group ☐ 5. Group & spouse ☐  
 2. Individual ☐ 6. Group & individual & spouse ☐  
 3. Group & individual ☐ 7. Unclear – give comment ☐  
 4. Individual & spouse ☐ \_\_\_\_\_

Personnel involved:

Psychological expertise

1. Lay counsellor or trained patient ☐ 4. Clin. Psych qualified +5yrs ☐  
 2. Clin. Psych. in training ☐ 5. Qualified non-psychologist (nurse / CBT ☐  
 3. Recently qualified Clin. Psych ☐ 6. Not given ☐

Health care team

1. No details given ☐  
 2. Multi-professional group of staff involved ☐ i.e. no 'team work'  
 3. Multidisciplinary team ☐ i.e. definite mention of team

Duration of intervention in weeks: \_\_\_\_\_ Total hours for this treatment: \_\_\_\_\_  
 Length of time to follow-up from start of treatment to longest follow up (in weeks): \_\_\_\_\_

**Treatment components**

**Note** If not details are given rate as 0 – not present or if you think that it is present rate it at the lowest level you think appropriate

Education:

0. No education mentioned as part of treatment ☐  
 1. Information about problems – not health ☐  
 2. Information – specific diseases & general treatment ☐  
 3. Information about models integrated into treatment ☐  
 4. Comprehensive education – manualised program ☐

Exercise:

0. No exercise programme ☐  
 1. Advice on exercise topics e.g. posture ☐  
 2. Nonspecific physio / fitness exercises ☐  
 3. Specific programme of targeted therapy ☐ e.g. on neck or back  
 4. Exercise managed by psychological principles ☐ includes contingency management and graded exposure

**Next page →**

Goal setting:

- 0. Not explicitly mentioned ☐
- 1. General statement that use ☐
- 2. List of areas for goal setting ☐

Problem Solving:

- 0. No training given ☐
- 1. Strategies taught in therapy ☐
- 2. PS is the main focus of treatment ☐

Relaxation:

- 0. No relaxation ☐
- 1. Passive – autogenic training ☐
- 2. Controlled breathing ☐
- 3. Unspecified relaxation ☐
- 4. Visualisation / hypnosis ☐
- 4. Progressive relaxation ☐
- 5. Combination of 1,2, or 3 ☐
- 6. General biofeedback ☐
- 7. Biofeedback at specific site ☐

Behavioural management:

- 0. Not present ☐
- 1. Minimal specification & advice ☐
- 2. Specific behaviour & advice ☐
- 3. As 2 + goal setting & rehearsal ☐
- 4. Fully specified operant programme ☐

Attention management:

- 0. Not present ☐
- 1. General advice given ☐
- 2. Specific practice in therapy ☐

Mindfulness / Meditation

- 0. Not present ☐
- 1. As part of treatment ☐
- 2. As the main treatment focus ☐

Cognitive restructuring:

- 0. No training given ☐
- 1. Coping Skills / stress management training ☐
- 2. Cognitive restructuring ☐
- 3. Partial elements of 1 & 2 ☐
- 4. Comprehensive program of 1 & 2 ☐

Spouse/Family involvement:

- 0. No spouse or family involvement ☐
- 1. Spouse or family member present for at least 1 session ☐ ....but not main focus of therapy
- 2. Spouse or family member involved as integral part of therapy ☐

protocol trained? Yes ☐ No ☐ Not reported ☐ on page no. \_\_\_\_\_  
 model trained? Yes ☐ No ☐ Not reported ☐ on page no. \_\_\_\_\_  
 regular supervision? Yes ☐ No ☐ Not reported ☐ on page no. \_\_\_\_\_  
 audio taped sessions reviewed? Yes - independently ☐ Not reported ☐ on page no. \_\_\_\_\_  
 Yes - team ☐ No ☐

**Notes of on any other aspect of Treatment that may need to be discussed**

Next page →

Outcomes \*\*\* Use separate sheet for each measure\*\*\*

Name of measure as used by author: \_\_\_\_\_

Domain of measurement:

- |                       |                          |                  |                          |
|-----------------------|--------------------------|------------------|--------------------------|
| 1. Anxiety            | <input type="checkbox"/> | 2. Mood / affect | <input type="checkbox"/> |
| 3. Composite distress | <input type="checkbox"/> |                  |                          |

Source of measurement:

- |   |                          |
|---|--------------------------|
| 1. Patient self-rating                            | <input type="checkbox"/> |
| 2. Spouse or family member                        | <input type="checkbox"/> |
| 3. Researcher / therapist, not blind to treatment | <input type="checkbox"/> |
| 4. Researcher, blind                              | <input type="checkbox"/> |

Data to Calculate Effect Sizes

Please insert the page on the manuscript from where you obtained these data

**CONTROL GROUP**

Mean pre-treatment: \_\_\_\_\_  
SD pre-treatment: \_\_\_\_\_  
N pre-treatment: \_\_\_\_\_  
Mean post treatment: \_\_\_\_\_  
SD post treatment: \_\_\_\_\_  
N post treatment: \_\_\_\_\_  
Mean f-up 1: \_\_\_\_\_  
SD f-up 1: \_\_\_\_\_  
N f-up 1: \_\_\_\_\_  
Mean f-up 2: \_\_\_\_\_  
SD f-up 2: \_\_\_\_\_  
N f-up 2: \_\_\_\_\_

**TREATMENT GROUP**

Mean pre-treatment: \_\_\_\_\_  
SD pre-treatment: \_\_\_\_\_  
N pre-treatment: \_\_\_\_\_  
Mean post treatment: \_\_\_\_\_  
SD post treatment: \_\_\_\_\_  
N post treatment: \_\_\_\_\_  
Mean f-up 1: \_\_\_\_\_  
SD f-up 1: \_\_\_\_\_  
N f-up 1: \_\_\_\_\_  
Mean f-up 2: \_\_\_\_\_  
SD f-up 2: \_\_\_\_\_  
N f-up 2: \_\_\_\_\_

Please give the times of the f-up data e.g. 6 months. \_\_\_\_\_

If the data is not in the form above is there a t or F test available if so what page is this on?

Do the authors report any of the following?

Reliable change index	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	on page no. _____
Clinically significant change	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	on page no. _____
Intention to treat analysis	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	on page no. _____
Multi site comparisons	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not relevant <input type="checkbox"/>

Pg

**Notes of on any other aspect of the Outcome extraction that may need to be discussed**

## Appendix 2 Quality Assessment Form

Study ID

Author

Year

Title

Quality question	Criteria to meet 'Yes'	
The study addresses an appropriate and clearly focused question.	1) Question is defined clearly in study. 2) Primary or secondary question relevant to this review 3) Adequate if only key elements of question in text.	YES / NO / NR
The assignment of subjects to treatment groups is randomised.	i.e. Assignment to either treatment or control is random, ideally off-site, computerised. If deterministic e.g. day of arrival, birth date, day of week - No If no <b>method</b> specified, use NR	YES / NO / NR Note if poor method <input type="checkbox"/>
Subjects and investigators are kept 'blind' about treatment allocation.	Researcher (administering any measures) blind to treatment allocation at pre and post timepoints of study.  If self report used (so no researcher), code NO, as possible bias with facilitator effect.	YES / NO / NR
The treatment and control groups are similar at the start of the trial.	Groups are similar on following (Yes / No / NR each): i) Gender ii) Age iii) Stage of disease (if appropriate) iv) Social background v) Ethnic origin vi) Co-morbid conditions If the groups have important differences in factors that may influence the outcomes, code NO. If not adequately described, use NR	YES / NO / NR i) ii) iii) iv) v) vi)
The only difference between groups is the treatment under investigation.	If additional components (to the psychological therapy) are used, these are reported and controlled for.	YES / NO / NR



All relevant outcomes are measured in a standard, valid and reliable way.	Psychological outcomes validated and reliable <u>for the population (ie at least one LTC)</u>	YES / NO / NR
What percentage of the individuals or clusters recruited into each treatment arm of the study dropped out before the study was completed?	Drop out pre to post (not follow-up) <= 20%	%
All the subjects are analysed in the groups to which they were randomly allocated (often referred to as intention to treat analysis).	YES if ITT mentioned in the text, 'modified' ITT is acceptable if an explanation is provided. NO if ITT is not mentioned in the text NR if 'modified' ITT is indicated without any explanation N/A if all participants accounted for and none are lost to follow up	YES / NO / NR / NA
Where the study is carried out at more than one site, results are comparable for all sites.	YES if the study is multi-site and there is no significant difference between sites. NO if 1+ sites have significantly better / worse data or different characteristics (e.g. inpatient vs. community) NR if no site specific data given NA if only one site	YES / NO / NR / NA
The treatment adheres to a manual the describes the active components of the treatment	Manual is referenced and components described in the article.	YES / NO / NR
There is a clear rationale for the treatment and an adequate description of its content	Rationale of intervention is based on a psychological theory	YES / NO / NR
The therapists were appropriately trained and supervised in the trial	i) Evidence of regular supervision from a suitably qualified professional ii) Therapists trained in both the therapy and the specific protocol	YES / NO / NR

<b>OVERALL</b>
----------------

<p>How well was the study done to minimise bias?</p>	<p><b>High:</b> Majority of criteria met. Little or no risk of bias. Results unlikely to be changed by further research.</p> <p><b>Acceptable:</b> Most criteria met. Some flaws with an associated risk of bias. Conclusions may change in the light of further studies</p> <p><b>Unacceptable:</b> Most criteria not met or significant flaws relating to key aspects of study design. Conclusions likely to change in the light of further studies.</p>	<p>High quality <input type="checkbox"/></p> <p>Acceptable <input type="checkbox"/></p> <p>Unacceptable <input type="checkbox"/></p>
<p>Are the results of this study directly applicable to the patient group targeted by this guideline?</p>	<p>Does this study make sense in the NHS context? Consider whether it is appropriate to extrapolate from other countries or health care systems</p>	<p>Yes <input type="checkbox"/></p> <p>NO <input type="checkbox"/></p>
<p>Summarise the authors' conclusions. Add any comments on your own assessment of the study and the extent to which it answers your question and mention any areas of uncertainty raised above.</p>		

# Better Living with Illness Group Protocol



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## Protocol delivery

This protocol is for a six-week group programme based on Acceptance and Commitment Therapy (ACT) to help individuals adjusting to living with a health condition. It has been based on the Living with Chronic Pain protocol (Vowles and McCracken, 2007) and the Quality of Life with Irritable Bowel Syndrome ACT protocol (Ferreira and Gillanders, 2012). The protocol can be delivered flexibly, in that sections of it can be moved or added to, but no components should be removed or replaced.

It is intended that the group should take place over 6 weeks, and has been designed to be delivered by two facilitators. Each session should take around 2.5 hours, including a 20 to 30 minute comfort break.

Attendance at the group is important, and the intervention is unlikely to be helpful where participants miss a number of sessions. It might be helpful to raise this early in the programme and highlight the importance of attendance. It may also be worth considering that if 2 or more sessions are missed, for example due to their health condition, that a recommendation is made to the participant to join a future group.

In this protocol, sections in italics are suggested wording that might be used in a session. Other non-italicised sections are prompts or information for the facilitator. This protocol should be used in conjunction with the participant workbook.

All participants should have had all relevant tests, investigations and medical checkups, and there should be no reason why they should not be included in a group or other more medical intervention. The specific inclusion criteria used for the initial implementation of this group were that the participants had been living with a health condition for at least 12 months, that they were fluent English speakers over the age of 18, and that they were interested in a group approach to their difficulties with a rehabilitative focus. Individuals with significant cognitive impairment, severe psychiatric difficulties (such as personality or psychotic disorders), significant risk of self harm, a personality not conducive to a group setting, or hearing / language / communication difficulties were considered unlikely to benefit from this intervention and were therefore excluded from the group. Individuals with a current primary diagnosis of cancer or requiring palliative care were also not be invited to join the group due to the nature of their condition and the organisation of existing services. Individuals that were currently receiving psychological therapy, or where a tailored approach to therapy was considered more appropriate, were also not offered this treatment.

It is anticipated that facilitators of this group will be skilled in delivering psychological therapies, and have had specific training in the Acceptance and Commitment Therapy model.

**Objectives of session:**

**To introduce the group to each other, the facilitators and the treatment rationale.**

**1.1 Introductions**

- Questionnaires and complete first page of workbook
- Facilitators names and background
- Housekeeping

Toilets ☐

Structure ☐

Confidentiality ☐

Timings ☐

Fire alarms / escape ☐

Group rules ☐

- For confidentiality, refer to workbook. Remind participants not to share details about each other with people from outside the group, or to discuss members of the group with each other, e.g. *everything that happens in the group stays in the group, except anything that you learn from it.*
- For group rules, refer to workbook.
- Group member introductions (name and brief information about why you're here and what you'd like to learn from this group).

**1.2 Overview of today**

- Living with a chronic illness [*Getting to know each other and understanding each other's experiences with their illness*]
- Coping so far [*Spending a bit of time considering how you manage and cope with your illness and the impact it has on your life*]
- Treatment rationale [*Explain that we'll talk about the ideas behind the group and what to expect*]
- Include discussion about worries around treatment and whether it will work or be worthwhile. Talk about how this is very normal, and encourage willingness to give it a go to see if it might be helpful.
- Consider including discussion around importance of regular attendance at the group (e.g. *if coming to the group is a valuable experience then it might be worthwhile to chose to come, even if it gets difficult or sticky*).

**1.3 Your experiences living with chronic illness**

*We'd like to start by getting to know a bit about each other and understanding the experiences you've had living with your illness. What impact has it had on your life? Tell us a bit about what it's like for you living with your health condition just now.*

Facilitators should invite someone to start this discussion and facilitate to ensure everyone is included, giving participants the opportunity to tell his or her 'story'. This can allow for acknowledgement of the longstanding nature of the conditions where appropriate. Look for impact of illness on life, such as reduced activity, difficult thoughts, impact on emotions, unpleasant body sensations, memories, etc. Focus on functional issues by asking participants what brought them to treatment and what they expect to get out of participating in it. This discussion provides an occasion to gently begin to shape the treatment focus and participant expectations. Use any opportunities to normalise individual experiences.

#### 1.4 The struggle

*What kind of things do you do to try and cope with or control your illness and everything that comes with it?*

Use a whiteboard and yellow post-its to list these. Possible examples:-

- Avoiding social situations
- Treatments
- Equipment
- Limiting activity/ resting
- Stop work or sports

*Whiteboard: What results have these strategies had in the short term for your illness? What about in the long term - in terms of your illness? And in terms of your quality of life? Are there similarities between some of the strategies? [Try to separate out control and non-control based strategies]*

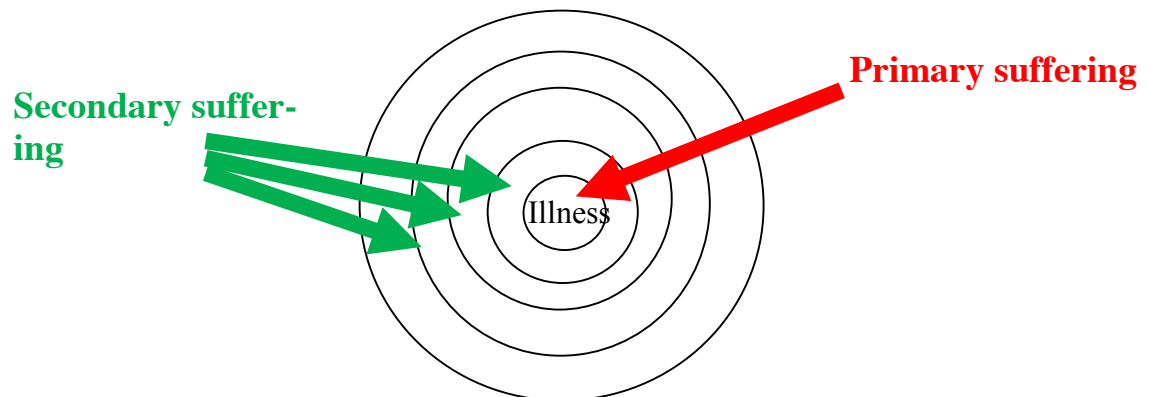
*Thinking about this, what does your experience tell you? What effect does trying to control your illness, and how you feel about it, have on your life - does it make your life and illness better? Or does it reduce your quality of life and make it harder to live with your illness?*

Looking for control / solution finding being the problem (but if this doesn't come, wait until after next bit). Stress that control can be a helpful strategy, but that sometimes it can become the problem.



### 1.5 **Exercise:** Primary vs secondary suffering?

Flipchart exercise: [Draw some concentric circles with 'Illness' in the middle, as per Figure 1 below].



**Figure 1: Suffering diagram for flipchart**

*This is the primary suffering, and something that we sometimes can't do a lot about.*

Ask people to suggest the difficult things that come along with this suffering (i.e. secondary suffering) and write these in the other circles.

Look for emotional suffering; not living a valued life; impact on relationships.

*Rationale - We can't eliminate suffering. In our understandable efforts to get rid of pain, symptoms, discomfort etc we do things that have the unintended consequence of taking us farther away from the things we care about.*

### 1.6 **Exercise:** Walking in the rain metaphor

*Imagine you're outside, walking somewhere that you need to go to, and it suddenly starts to rain. No, not rain, pour down. Its really buck-eting and you're starting to get wet. You've got quite a long way to go and no umbrella on you. [PAUSE] You're starting to feel fed up and cold and miserable. What would happen to your body and posture? Imagine it now and let your body sense it and change as it would if it were happening right now. [PAUSE] Notice what kind of changes your body makes.*

Short debrief, asking participants what they noticed, and what they thought would happen to their posture in this scenario.

*OK, lets stick with the same scenario, but this time try imagining that your attitude was "OK, I'm getting wet. I can't do anything about it. Wish I'd remembered my umbrella. Oh well, never mind. I'm still getting really wet!" [PAUSE] Pay attention to how this feels in your body and whats happened to your posture with this. [PAUSE] Notice what happens to your body and posture in this scenario.*

Short debrief, asking participants which scenario they are more likely to get wet in, and what difference there is between the two scenarios. Looking for how we may not be able to change some things like rain, but if we can change how we stand towards it, it changes our experience.

*What we're going to be doing over the next five weeks is learning about how to live life in the presence of the difficulties that you have with your health, while connecting to things that are important to you in the here and now.*

Where participants ask questions like 'so what should I do now?', try to avoid jumping in and giving explanations or rationale. Instead, perhaps point out that this might be a familiar experience for participants, that they feel keen to rush in and try to 'solve the problem'. Participants could be asked whether there is anything else they could be doing with their time instead of trying to figure out and solve the problem? Or describe how perhaps this feeling of understanding a bit about the problem and feeling the urge to solve it is maybe a sign that they are getting closer to where they need to go – like when children play the game when a token is hidden somewhere in a room, and as they try to find it, they are told when they are getting warmer or colder. Perhaps this feeling is a sign that they are getting warmer, and so maybe we need to stick with that feeling rather than solve the problem to get rid of it.

### **1.7 Homework:** Diary for each day (see Workbook)

*To help you make changes to your life and try to get the most from this group programme, we will suggest something for you to try at home in between our sessions. This is not compulsory, but we suggest it because we think it will help you to change your life. We understand that things can get in the way of this, but when this happens, we'd like you to think about what's important to you and why you come along to the group, and take a minute to make a choice about whether or not you will try it. And even if you don't do this, make a note of not doing it, and bring this along to the group too.*

*This week, we'd like you to take 5 minutes each day to stop and think about what you can potentially do to live your life even with your illness. And we'll start by trying this out today. So spend the next 5 minutes or so thinking about what you can do even if you have your*

*illness. Perhaps think about whether there are things that you are currently doing that are not serving you well, that you could let go of. Try to be as specific as possible. If you get stuck or keep focussing on getting rid of your physical symptoms, perhaps consider what you would do if you no longer had your illness, or things you've done in the past even with your illness that have surprised you.*

Debrief – any problems. Can include here encouragement to notice thoughts saying 'this is pointless' etc and to see if we can have the thought without letting it stop us from considering this.

*Try to find 5 minutes every day to do this. We'll discuss it more next week as this is an important foundation to build upon. Please take time each day to complete this task, perhaps building into your daily routine by doing it at a particular time of the day, e.g. when you have a cup of tea or coffee.*

### **Objectives of session**

**To learn about thoughts, emotions, behaviour and physiology**

**To understand how strategies like suppression can be unhelpful**

**To learn about mindfulness as an awareness technique**

### 2.1 Recap

*Last time we shared experiences of living with chronic illness and talked about the different ways you'd tried to cope and control your illness and the thoughts, emotions and sensations that come with it.*

*We talked about how this seemed to be having an impact on quality of life in the long term and that maybe trying to control our illness, and also our emotions, was becoming the problem. We also discussed suffering, and how we often can't do anything to reduce the primary suffering in our life, but the ways we cope with this suffering can amplify it and have a bigger impact on our life.*

Ask how people got on with the homework task and what sort of things people wrote about as choices. Can be used to a) introduce concept of values, b) talk about workability and cost / benefit of strategies, c) noticing when one is 'stuck' and becoming caught up with how bad that experience can be versus noticing being 'stuck' and moving on based on goals, values, etc. d) introducing the possibility that everything is a choice and that there is nothing that one 'has to do' and not doing something is a choice just like choosing to do something is a choice. Possibility to move on to session 3 (values section) here if more appropriate for the group.

Also potential to discuss if anything got in the way of doing homework? What can help you next time in that or other circumstances to help you do it? Are there other times in the past that you've managed to achieve similar things & how can you build on that to help you this time?

### 2.2 Overview of today

- What it's like having difficult symptoms, and thoughts and emotions about our illness
- What we do with them

### 2.3 **Exercise:** Passengers on a bus (experiential or didactic)

This exercise can work well experientially, asking participants to play the part of symptoms, thoughts or feelings etc and of the bus driver, with a value written on a board in front of the driver.

*Sometimes our symptoms, thoughts and feelings about our illness can get in the way of us doing what is important to us. One way to think of it is like you're the driver of a bus. As the driver, you know where this bus is going. Its somewhere you know you really want to go, somewhere really important to you. At the same time, there are passengers on this bus, and some of them are really horrible. These passengers are like your symptoms, thoughts, feelings, body sensations and memories. They don't always want to go where you want to, and when you don't go their way, they let you know about it. So let's say you want to take this bus that is your life, in the direction of going out for a meal with someone you really care about. One of the passengers starts saying things like I wouldn't bother, you're just going to end up sore and exhausted." What kind of things do your passengers say to you? [Pause] Could you describe what any of them look like? [Pause].*

*These passengers might rush up behind you, shout in your face, threaten you – they're basically bullying you into doing what they say. So, understandably, you choose to do what they say, and not go where you want to go and they settle down, into the back of the bus and out of sight. Maybe you make a deal with them – 'if you sit in the back and hide down behind the seats so I can't see you, I'll go wherever you want me to'. In the meantime you're driving around in circles, and not going anywhere in particular, just driving aimlessly.*

*Now you may get fed up with this eventually. What else might you try? [Pause] Maybe the next thing you try is getting rid of these nasty passengers. So to do that, you first stop the bus and then head up towards the passengers to confront them. But notice, the very first thing you had to do here was stop the bus. Where is your bus going right now? [Pause] Is it going to that really important place you want it to go to? [Pause] When you go to try to deal with the nasty passengers - and there are many of them – they look ready to fight you. You give it your best shot and wrestle with them. But ask yourself this – how well has it worked? [Pause] And notice that all the time you fight them, the bus is not going anywhere. [Pause]*

*And so it's back to the old agreement, if they leave you alone, you will only go where they say and nowhere else. Pretty soon, they don't have to tell you where to go, you can predict it. You see something really important coming up in your life, maybe a family gathering that you really want to go to, and know as soon as you see it that they're going to start yelling at you: "You'll never manage that! So why bother?". Over time you can maybe even pretend that you don't have any passengers any more. You maybe tell yourself that's where you just have to go. However, when they do show up, it's with the added power from the deals you've made with them before.*

*Notice this interesting part, the key thing - these passengers have never done you any physical harm. They cannot, and never will. What they're basically saying is 'If you don't do what we say, we're going to come right up to you, and you're going to have to look at us'. All they've got over you is the ability to intimidate. They do look really nasty, horrible and scary, there's no getting away from that. However, the only power they have over you is the power you give them. You are the driver and you trade your control over the bus to keep the passengers away. Your passengers are maybe telling you that what you're doing is dangerous, scary, silly, difficult, worthless. That's their job to do that. Your job is to drive the bus in the direction that you've chosen.*

#### 2.4 Unhelpful role of suppressing emotions and thoughts.

Revisit discussion from last week (referring to flipcharts) about short and long term consequences of control strategies for physical symptoms, and the effectiveness about this as a strategy ('The Struggle'). Ask how much of these strategies are about keeping the passengers on the bus quiet?

Consider first feelings: *what do people think? Is controlling our feelings a strategy that works well?*

#### 2.5 **Exercise:** Suppressing feelings: polygraph

*Imagine you're wired up to a polygraph, a lie detector. You're told that you must not, under any circumstances, get anxious. Not even a tiny bit. If you do, the polygraph will pick it up - that's what it's designed to do. And if it detects you being anxious, then an alarm bell will go off and you will get an electric shock. What would happen? [Get shocked!] So even though something horrible would happen that you really want to avoid, you can't control or eliminate your emotions for that?*

#### 2.6 **Exercise:** Suppressing thoughts: white rabbit

*OK, how about our thoughts then. I'd like you all to not think about, at all, in any way, not even for a millisecond, a bit white fluffy rabbit, with lovely big pink ears. [pause for 10-20 seconds]. How are folk getting on with that?*

*So what can we learn from those two exercises?*

Look for how control doesn't work.

*We can put a lot of effort into trying to control these passengers on our bus, but the harder we try to quieten them down, the louder they seem to get.*

## 2.7 **Skills practice:** Mindfulness

*So it seems that controlling our thoughts and emotions is sometimes unhelpful or unworkable in trying to live with illness. It's maybe a bit like having a tug of war with a huge big illness monster. You're holding the rope tight, pulling hard, and the monster is on the other side of a big, dark pit, pulling back. You're starting to get pulled towards the pit, so naturally you pull even harder. But the harder you pull, the harder the monster pulls. Does this feel about right? But notice that this has been going on for some time. The monster hasn't pulled you into the pit yet and you haven't managed to get rid of the monster by pulling it into the pit either. Seems like you're both still hanging in there, trying to beat the other and not going anywhere much. Does it sometimes feel like you're stuck? What do you need to do? If you saw someone in a tug of war with a monster like that, what could they do? Drop the rope. The monster is still there, but you're no longer caught up in the struggle with it and can get on with whatever is important to you.*

*One thing that can help us to drop the rope is noticing when we have been hooked into picking it up. For that we teach a purposeful form of paying attention called mindfulness. It helps us notice what is hooking us at any given moment and gives us a moment of space to decide what we want to do in that moment. This is a skill and something that takes practice to get the hang of, but we'll start small so that we can learn together. So if you're willing to give this a try:-*

Introduction to Mindfulness script (Appendix 1).

Ask for feedback (one by one if time allows). Normalise being distracted by thoughts and praise noticing (effort), rather than achieving.

Leaves on a stream mindfulness (Appendix 2).

Ask for feedback (one by one if time allows). Normalise being distracted by thoughts and praise noticing (effort), rather than achieving.

## 2.8 **Homework:** Mindfulness

*Over the next week, we'd like you to find 5 or 10 minutes every day to practice mindfulness of your breath using this CD, and record your experiences in the workbook. There are notes on doing this in your workbook. Practicing this is an important foundation for us to build on in future weeks. When thoughts come up during your practice, try to notice the thoughts and gently bring your attention back to whatever you have chosen for your focus. You can make a note of what this was like in the diary in your workbook.*

*We know that things come up though that might get in the way of you doing this. If this happens, we'd ask you to notice that it has, and come back and tell us about that and what it was like.*



## Objectives of session:

To understand what values are and how to identify them

### 3.1 Recap

- Passengers on our bus
- Suppression of thoughts, emotions and symptoms, and how controlling our thoughts doesn't really work
- Awareness of thoughts and mindfulness
- Review of homework – mindfulness. *How did it go? What did people learn? What was the experience like? Praise effort / 'noticing'. Anything get in the way of doing homework? What can help you next time in that or other circumstances (barriers) to help you achieve it? Are there other times in the past that you've managed to achieve similar things & how can you build on that to help you this time?*

### 3.2 Overview of today

- What are values?
- Identifying our values
- Mindfulness

### 3.3 Values identification<sup>15</sup>

*If we're going to get behind the wheel and take our bus in the direction that's most important to us, we need to know where we're going. Sometimes it can be unclear what direction this is though. We're going to be spending today talking about our values to help us understand and connect with which directions are important to you and where you want to take your bus.*

Ask the group - what is a value? Possible whiteboard task, looking for:

- What you want to live by and for
- Personal
- Chosen freely
- Give life direction and meaning
- Values can never be achieved – that would be a goal
- Something that is very important to you

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<sup>15</sup> These exercises have drawn on ones developed by Phillipa Newton-Cross and Jackie Fearn, NHS Devon, and Ellen Townend, Shona Yates and Kim Kemp NHS Fife.

Use a selection of 'famous faces' to stimulate a discussion about other people's values and familiarise the group with values-language (e.g. Kermit the frog, Mother Theresa, Barack Obama, Superman). Ask for any personal super-heroes to add to this list. Ask what qualities they embody or what their values might be? What did they stand for and live by? Can use a list of values (see Appendix 3) to help prompt people.

*Values are a bit like a compass – they guide you as to the direction for your journey through life. We might pass landmarks on the way. Ask group for what kind of landmarks there are to the south of here, the towns and villages we might pass through – these are like goals, destinations. Our track might waver from the direction that the compass guides us in, and we might feel a bit lost or confused, but our compass can guide us back to the path that's important to us. We don't ever 'arrive' at our values.*

*Most people have more than one value in life. Values can be in a number of areas, for example:*

- *Family*
- *Friends*
- *Partner*
- *Work*
- *Self care*
- *Personal growth and development*

*We're going to think about what is important to each of us deep down today, across our life as a whole, thinking about: What do you want your life to be about? What sort of person do you want to be? What kind of things would you be doing if you were living that value?*

*It can be quite challenging to think about these things. It can raise difficult issues and feelings about how we are not doing what is important to us, or how our conditions tell us we can't do these things. Sometimes our mind can tell us that our values are "impossible" or "unrealistic" or "not really important enough". As we're thinking about our values today and these thoughts come up, try to notice when they do and gently let these thoughts go.*

### **3.4 Exercise: 80<sup>th</sup> birthday party**

See Appendix 4 for 80<sup>th</sup> birthday party script. This can also be adapted to be a roll forward script (e.g. imaging you start to make changes to your life from today. Roll forward a year, and imagine what your life is like then... Keep rolling forward until you are living your life even with the difficulties that you have now, but without struggling with them.)

Debrief – ask if there is anyone who would like to share any part of their speeches.

Encourage people to share the values that this exercise has identified around the domains listed above. Look out for possible problems with identified values, such as: Could a dead man do better than a living one at the value; Is it a goal or a process rather than a value? what if no one knew that was your value – would it still be important to you?; is it a goal about other people? Can return to list of values (Appendix 3) if people need more prompting about different values.

### **3.5 Exercise: Values Circle worksheet**

Ask the group to split into pairs and issue each person with a Values Circle worksheet (see Appendix 5) Ask pairs to work together, looking at each of the 6 domains and thinking about what is important to them in that area, what they want to stand for and live by. Then using the circle, participants should write an identified value beside a segment of the circle (for as many values as they have identified), and shade in each segment to show how much they're living their life in line with their values. Sometimes a domain might have a number of values associated with it; other times perhaps just one or even none. Hence the segments correspond to values, rather than domains.

### **3.6 Skills practice: Values and commitments**

*Think about one of the values that you have identified that you'd like to work on right now, perhaps one that you feel hasn't been shaded as much as you'd like. When you're ready, close your eyes and try to settle in to the here and now. And without needing to commit to any action, or deciding you're going to do something, imagine one large commitment and one small commitment, possibly the smallest one that you can think of, that you could do that would be in line with your values today. Notice what shows up in your mind as you think about these commitments. Remember, we're not thinking about DOING these commitments, just trying to identify what these would be. When you've identified what they are, open your eyes and write them down.*

*Look at your small commitment. Are you willing to do that today?*

### **3.7 Skills practice: Mindfulness body scan**

*Before we finish up for today, we're going to try another mindfulness activity. This one is called a body scan, and often people with physical discomfort or pain can find it quite helpful. However, any change in tension or pain isn't the goal with this exercise. What we're focussing on is becoming more aware of our bodies and what is happening in*

*them. As we're scanning round our bodies, our focus will be on noticing and observing, rather than trying to change any sensations that we find.*

#### Appendix 7 Mindfulness body scan

Ask for feedback (one by one if time allows). Normalise being distracted by thoughts and praise noticing (effort), rather than achieving.

### **3.8 Homework**

*Try to find a few minutes each day to focus on one of the values that you've been thinking about today and choose something that you could do, perhaps something very small that would take you towards living your values. There is a diary in your workbook that you can use to keep a note of the steps you take over the next week in your valued direction.*

*Try also to find time to practice mindfulness every day using the body scan track on the CD.*

**Objectives:**

**To identify values-based goals**

**To learn about defusion from thoughts**

**To learn about problem solving strategies**

4.1 Recap

- What values are [compass metaphor]
- Identifying values [via 80<sup>th</sup> birthday party and Values Circle]
- Values visualisation [commitments – small and large]
- Mindfulness body scan
- Review of progress so far – what have you learned? What's been helpful? What have you changed? What would you still like to work on?
- Review of homework – Mindfulness. Small commitment – how did that go? Values worksheet – anything get in the way?
- May be useful to take the opportunity to do some values clarification work from here by getting into pairs and discussing identified values, focussing on:
  - ❖ Is it a goal or a value? Can it be achieved? If yes, it's a goal – think about what the value behind the goal is.
  - ❖ Personal values versus values of others – what if noone knew you were doing this? What if everyone forgot that you did it when you finished?
  - ❖ Clarification: What would this do for you? What is this value in the service of? Would you want this on your tombstone?

4.2 Overview of today

- Setting values-based goals
- Stepping back from thoughts
- Problem solving

4.3 **Skills practice:** Goal setting example based on values.

*So, last week gave us a better idea of what our values are, but where do we start with trying to live our values? We could choose to start work on our easiest value, a bit like choosing to walk up a hill before tackling Ben Nevis (or another large mountain). But then again, Ben Nevis is maybe the value that is most motivating for you. Once we've chosen a value to work on, we need to work out how best to make changes that will help us live our value more. One skill that can be helpful in doing this is setting goals. Goals are different to our values. We've talked today about how values are like our compass, the direction we're travelling in. Goals, however, are the landmarks we pass on*

*the way, and if they're in the direction of our values, we know we're on the path that we want to be on.*

*When we are thinking about our goals, its useful to remember to make them SMART, i.e.*

- *Specific*
- *Measurable and meaningful*
- *Achievable*
- *Realistic*
- *Time framed*

*One way to go about this is to focus on one value, and think of some SMART short and longer terms goals related to that value.*

*Here is an example. Imagine someone had identified that their top 3 values were:*

- (a) Be a supportive and trustworthy friend*
- (b) Take care of myself*
- (c) Be a caring / loving spouse / partner / parent etc*

*Let's focus on goals in the direction of value (a) first of all. Goals can be very small, immediate actions, or they can be ones for the short, medium or long term. It can be helpful to think of each of these in turn.*

Long term goal – Can brainstorm examples, or one example is arrange a trip with two friends once a year so we can get together and spend time together in a place where none of us have been before.

Medium term goal – Again, try to brainstorm ideas. As an example, begin to save £5 per week to fund a trip

Short-term goal – Again, try to brainstorm ideas. As an example, could arrange to meet a friend for lunch or coffee and to do this once per week)

Immediate goal – Brainstorm ideas. One idea is to set aside 10-15 minutes today to call a friend, and to continue to do this twice a week

Issue worksheet from Appendix 6 and work through own value and goals.

#### 4.4 Stepping back from our thoughts

*When we're talking about values, and particularly about how to move towards our values, our passengers can often get quite noisy. We might find ourselves tuning into them, maybe even fighting with them, and all the time we're doing that, we're not driving our bus the way we want it to go. Sometimes it can be hard to notice that we are getting*

*entangled in our difficult or painful thoughts and it might feel like we don't have a choice about how we act.*

Talk about what the passengers have been saying to participants already as they've been trying to think about their goals. Can introduce notion of thoughts on hands over eyes, and difference in what you can do if you hold your hands / thoughts at arms length.

*I'd like us to try an experiment (adapt if there is anyone with shoulder problems). I'd like you, if you're willing, to say the phrase "I cannot raise my arm" over and over again in your head while raising your arm. OK?*

*What did you find happened? What does this tell us about our thoughts and actions? Was there a delay in raising arm? What was that about?*

#### **4.5 Exercise: milk milk milk**

*Let's try something else to see if we can learn some more about our thoughts. I'm going to say a word, and I'd like you to tell me what comes to mind when I say it. Milk. What kind of things are coming into your mind? [Cold, white, creamy, etc] Can anyone feel what it's like to drink a glass of milk?*

*So, when I said "milk", lots of thoughts about milk and your experience of it have come into your mind. Just the act of making a sound - milk - brings up all of those thoughts. There's no milk here in this room, yet we were seeing it, tasting it, feeling it, in a sense.*

*OK, this time I'd like us all to say the word milk, out loud, over and over again. We'll do it with you! Keep going until I say to stop. OK? Lets go [repeat milk]. OK stop.*

*What did you notice this time? Milk - it's just a sound, a word. The first time, it felt like it was here in the room, it really hooked us in. But when we repeated the sound over and over again, it lost some of its meaning. It became just a sound. What could we learn from this about the thoughts that come into our head?*

*Let's try this with a word that comes up in our thoughts a lot. (Pick an example from the ones that have already come up in the group, e.g. from the passengers on the bus). If you're finding you're thinking about a sentence, try to boil it down into one word that sums up. Write it down. Think about how close that thought is to you.*

Can physicalise here using hands over eyes.

*Now, take that word and repeat it just like we did with 'milk'. What was that like? How close is that word to you now? (Physicalise with hands)*

*Debrief – Ask what can we learn from this? Looking for thoughts are just thoughts, not facts. Also important to note that this holds even when thoughts are 'true'. Where this is the case, emphasis empathy, compassion and how upsetting that the thought is, and that we are not going to debate how it is true or otherwise. However, when these thoughts are held close and dominate what is less possible in the world of behaviour, compared to having that thought and acting on values even whilst carrying that true and upsetting thought.*

#### **4.6 Skill practice: Labelling thoughts**

*One way we can use this to help us with difficult thoughts is by labelling them as what they are. We can use this idea with emotions, memories, urges, feelings too. So, for example, instead of thinking or saying "I can't go on like this", you can add a phrase to label this as a thought and say "I am having the thought that I can't go on like this".*

*Let's try this together. Think of something you've been struggling with recently. Really focus on it and see what thoughts come into your mind. Choose one that has a strong impact on you.*

*Now, hold this thought in your mind and really focus on it for the next 60 seconds. What is that like for everyone? How close is that thought to you?*

*This time, let's all try rephrasing your thought so that you focus on "I am having the thought that..." Focus again for 20 seconds. What is that like? Did anyone notice anything different?*

*Lets try it again, but this time add in "I notice that I am having the thought that..." Focus on this for 60 seconds. How is this for everyone? Does anyone have any thoughts on how this could be used outside of this group?*

#### **4.7 Exercise: Problem Solving**

*Sometimes other things can get in the way of us working towards our values-based goals and living our life in line with our values. When this happens, we can apply problem strategies to help us choose what to do. This can be really helpful at times, but like any tool, we need to make sure we are using it to help us get where we want to be. It can be useful to think of the serenity prayer here:*



*Grant me the serenity to accept the things I cannot change;  
courage to change the things I can;  
and wisdom to know the difference.*

*Where problem solving strategies work for us and are used for things we can do something about, they can be very helpful. We do, however, need to be careful that we don't get hooked into using it for things that can't be solved or changed – where it's not really the right tool for the job.*

*So, if we think solving a problem will help us to do more of the important stuff in our life, then the first step we need to do is to be clear about what our value is, and what it is that is getting in the way. This can be useful as it helps us to step back from the thoughts about the problem and start looking towards what we want to do about them. So to take an example, perhaps you value learning and developing new skills, and you have set a goal of doing a photography course. However, when you applied to your local college for the course, they were unable to offer you a place as the course was full.*

*Once we have our problem on paper, the next step is brainstorming all the different options that we have. It's helpful at this point to include absolutely anything, even impossible or silly options, as these can sometimes spark off a very useful option. It's also best to try to stick to thinking of as many options as possible without starting to think through the detail of any of them at this point. Let's have a go with our example... You might find as you're doing this that your mind starts to tell you that some of your ideas are rubbish, impossible, silly. When this happens, just try to hold that thought lightly, and put it down on the paper anyway.*

*What kind of options can you think of? Options might include:-*

- Contacting all the other colleges in the area*
- Asking to go on the local college waiting list*
- Buying or borrowing a book*
- Using the internet to learn basics*
- Finding out about distance learning courses*
- Inviting Lord Snowdon (or other famous photographer) round for a chat*
- Going to a photography exhibition*
- Visiting the library to find out about any local groups*
- Taking a painting class instead of photography*

*Once we have a list of ideas, the next step is to think about the pros and cons of each idea in turn, and choose the one that makes the most sense. So, in our example:-*

Contacting colleges – will take time and effort, and possibly extra travelling, but will mean can still get on a course soon

Waiting list – easy to do, but needs patience

Book – will take time to find one and may be difficult to learn from a book

Internet – free and easy and youtube might make learning better, but may be difficult to know if quality of information is good. Won't meet like-minded people.

Distance learning – easy to do and better quality, but may be difficult to learn some things this way

Snowdon - !!!

Exhibition – might be fun and might meet other interested people, but not immediate access to learning

Groups – would be able to meet other like minded people and might learn from them. Could be cheaper and easier, but might not be any groups and might be too advanced for a beginner.

### Choice – contacting other colleges

And now, once we've chosen an option, we need to think carefully about how we're going to do this. Often it is helpful to break the option down into smaller 'chunks'. We can then plan when it will take place, where, who is involved. The more information we think through here, the more chance it will happen.

So, in our example, we could break this option down into:-

- Google local colleges and make a list of them.
- Check each college website to see if they offer beginners photography courses
- Call each college to check dates, prices and availability
- Check how far away each college is
- Check on website to see if there are discounts or funding for courses
- Possibly visit each college to find out more
- Choose college and book into course

And finally, once we've carried out the action, we can evaluate whether it has solved our problem and helped us live our value or not. If it has - great! If not, or if we think more could be done, then maybe we want to go back to the list of options again and choose another one, or perhaps start the process again.

So in our example, we get through all the steps and are booked into a course, but realise that we can't get a bus to that college for the time of the course. So – we can follow the process again, clarifying what the problem is and brainstorming options like finding alternative transport or switching to another college further away but with better bus links.

*So, using these kind of problem solving strategies can be very helpful in moving us towards living a life in line with our values. But it's important that we are aware of when it's helping us to do this, and when it's not, so that we can make a choice about whether this is the right tool for us in this moment.*

#### **4.8 Homework**

Identify 3 values, 3 related goals, and 3 actions for each goal, as per workbook. This could be new goals or values, or ones previously identified that participants want to do further work on.

*As well as this, try to find 5 or 10 minutes every day to practice being mindful when you're doing everyday things. You can continue to practice this using the CD, but see if you can also practice being mindful of other activities, such as brushing your teeth, your breathing, washing up dishes, sitting in the garden or having a shower.*

*Whatever you choose to be mindful of, try to notice as much about it as you can – noises, textures, sensations, colours, shades, moisture, temperature. When thoughts or feelings come up and distract you, try to practice noticing this, and then gently bringing your attention back to whatever you are trying to focus on.*

*When you get thoughts that hook you into thinking about other things – perhaps about being bored, or what you're doing later - try to practice noticing when this has happened and gently bring your attention back to whatever you have chosen. We're not trying to stop thoughts about other things from happening here. Instead we're trying to notice when it happens (and it will happen!), and then practice redirecting our attention back to whatever you have chosen to be mindful of.*

*To help you get some practice of this today, as you're leaving, see if you can practice mindfulness as you prepare to leave here and get your coat, perhaps really noticing how you put your coat on, or being mindful of your movements as you leave.*

**Objectives:**

**To learn about how communicating assertively in living can be helpful in doing more valued activity**

**To identify stepping stones in line with your values**

**To practise mindful acceptance**

5.1 Recap

- Setting goals that are in line with our values
- Things that get in the way of valued living
- Techniques helpful with these barriers, such as problem solving
- Review of homework – identifying values, goals and actions; mindfulness body scan

5.2 Overview of today

- Assertiveness
- Stepping stones
- Mindful acceptance

5.3 Barriers to valued living

*Today is about paying attention to the things that are truly important to you. We've been talking for the last 2 weeks about personal values, and what we can do to live our values. Sometimes this can feel really difficult though. What kind of things can get in the way of us living our values?*

Look for thoughts and feelings and health symptoms / pain.

*Remember how we talked about passengers on a bus? And how our thoughts, symptoms, feelings, sensations, urges, memories, etc are like our passengers. They often try to tell us that what you're doing is dangerous, scary, silly, difficult, worthless. That's their job to do that. Your job is to drive the bus in the direction that you've chosen. But those passengers can make it really difficult.*

5.4 **Exercise:** Assertiveness

*One thing our "passengers" can affect is how we communicate with others. Some people find that the significant changes that happen to a person's life when they have a long term condition can make it harder for them to communicate with others. People sometimes find that they feel less confident asserting their needs. Some people talk about how*

*they have a lot of thoughts about how they are a nuisance to others and difficult feelings of guilt that lead them to put the needs of others before their own. This is what we call being passive, and is characterised by not expressing your thoughts and feelings in the way you want to, and being submissive towards others.*

*Other people, however, might find that they start to communicate in a more aggressive way, perhaps getting caught up with thoughts about how unfair the situation is and experiencing difficult feelings of anger and frustration. This aggressive style of communication involves expressing your own thoughts and feelings, but doing this in a way that is at the expense of others, maybe by shouting or arguing.*

*Another way of communicating is to be what we call assertive, which involves expressing thoughts and feelings in a calm, confident way while listening and respecting the person that you are communicating with.*

*We're going to do a small task now. We are going to leave some cards here. Each card has a behaviour or action on it. We will put 3 headings up on the wall - aggressive, assertive and passive. We'd like you to work together and decide whether you think that behaviour is assertive, aggressive or passive, and place it under the correct heading, and then we'll discuss each as a group afterwards.*

List of behaviours - shout, call name, clench fists, threaten, hit, verbally hurt, listening, explain your point, polite, calm, persistence, avoid speaking, always agree with others, don't argue, avoid looking at others, hold eye gaze, mumble, ignore what someone is saying, cry, moan, whimper, wince, hold breath, snap, bite partners head off, say, "No don't worry about me, I'll be fine" when you don't mean it, saying "anything you say, you know best doctor", not speaking up in the Better Living with Illness group, jumping straight in every time in the Better Living with Illness group, bad mouthing your doctor to the psychologists, complaining about the NHS / government / dr's / state of medical technology, etc.

After the task, facilitate a discussion about each of the categories.

*Which behaviours were easy to categorise? Which were harder? What information would have made it easier to decide which category to place it in? What advantages are there to communicating in each of the styles? What about costs or disadvantages? What does your experience tell you about which communication styles work best?*

*Communicating assertively can give us a choice about how we behave and communicate with other people. It has the advantages of being able to express ourselves and our needs while doing this in a*

*way that strengthens our relationships with others and helps us to live our lives in line with our values.*

*When we're trying to be assertive, there are some things that it can be helpful to bear in mind:-*

- *Try to be clear and succinct*
- *Be polite but firm*
- *Try to keep a calm voice and body*
- *Use good eye contact*
- *Listen carefully to what the other person is saying*

*There are also a couple of techniques that can be very helpful in doing this. The first is called I-messages. This involves trying to start each sentence with 'I'. So, instead of saying 'You are always taking advantage of me like this', you could try 'I feel like I'm being taken advantage of'.*

Option to include quiz with a few more examples that people need to try to 'convert', e.g.

- You make me so angry!
- Why won't you listen to me?
- It's not fair, you getting to choose the channel again.

*One other technique that can be really helpful is the broken record technique. This involves being persistent and calmly repeating the same statement. For example, if someone stopped you in the shopping centre and tried to sell you a new Sky package, you could state, 'Thank you, but I'm not interested'. They may well say something else in reply as part of their sales pitch, to which you can calmly and politely repeat 'Thank you, but I'm not interested'.*

### **5.5 Skills practice: Assertive communication role play**

Ask everyone to get into pairs or 3s and give a scenario (e.g. asking for help around the house, or a friend or relative asking you to do more than you can manage). One of the group plays the friend / relative, and the other practise using some of these techniques, and then swap (with a 3<sup>rd</sup> person being a coach, encouraging and prompting if necessary in using these skills, making suggestions, etc).

Feedback – what was that like? What made it difficult? What could you take away from that?

### **5.6 Exercise: Stepping stones**

*Skills like assertive communication can be really helpful in moving us towards living our values. But taking steps in the direction of our values involves making a commitment to do something. It's a bit like*

*crossing a river to get somewhere really amazing and important to you using stepping stones. How might you go about this? You could practise first maybe, by putting some stones on the grass that you're standing on and stepping from one to another. You could maybe ask someone to demonstrate how to do it while you watch them. Are there any other ways you would go about it? [Pause] You could also try to step to the first stone by stretching out your leg [demonstrate]. But while we're trying like this, are we actually making steps towards the other side, the place that's really important to us? Notice how it looks and maybe feels a bit strange, just trying.*

*What if we actually take the step forward. Stand on a bank and ask ourselves if we are completely 100% ready to commit to stepping onto the stone. And if we are, go ahead and take the step.*

*What would happen if I asked you to step to a stone that's 4 feet away? Or a high boulder? Or a pebble? [pause] Notice that we can choose to be willing to do something like stepping in some situations, like from one stone to another stone that's close by and looks stable, and not in others, such as a stone that's far away. There might be reasons for you not stepping onto the far away stone. Perhaps it's too risky for you. Or maybe it's just not important enough to you and doesn't fit in with your values. But what's clear about the stepping here is that it is all-or-nothing. You either do it or you don't. I can't stick my toes off the edge of the stone and say 'look, I'm jumping!' We can choose which situations we're going to be willing to do something in, but we can't be half-willing. Willingness is something you either do or don't have.*

*What we've been trying here in this group is to start setting goals that are stepping stones to living our values every day.*

Discussion around what their experience is of setting goals – looking for avoidance (e.g. “after the group has finished” or “next year”) or fusion (confidence, motivation).

### **5.7 Exercise: Reasons as passengers**

Outline the passengers on the bus metaphor, ideally experientially. This time, ask a participant to volunteer to be the bus driver and talk about the reasons that they have for not taking the step towards an important value-based goal that they have identified. Write the goal on a board in front of the driver and ask other participants to play the part of passengers, shouting out reasons for not taking the step. See if the person can drive towards their goal even with all of these reasons shouting at them. This can also be extended to be a reminder of defusion techniques, e.g. by labelling the passengers as passengers / thoughts.

### 5.8 **Skills practice:** Mindful Acceptance

*We'd like to finish today's session by practicing mindfulness. Last week we tried being mindful of our bodies and exploring the sensations that we have in our bodies. This week we're going to try being mindful of how we feel emotionally, understanding where we feel that emotion in our body.*

Appendix 8: Mindful Acceptance



### **5.9 Homework**

Encourage to set own commitments as homework, as per workbook. Ask participants to start by spending 5 minutes doing this when they get home from the group. This could be following up on commitments from last week, or new commitments.

Practise mindful acceptance daily with CD.

**Objectives of session:****To learn about how pacing can be helpful in doing more valued activity****Review content of group**6.1 Recap

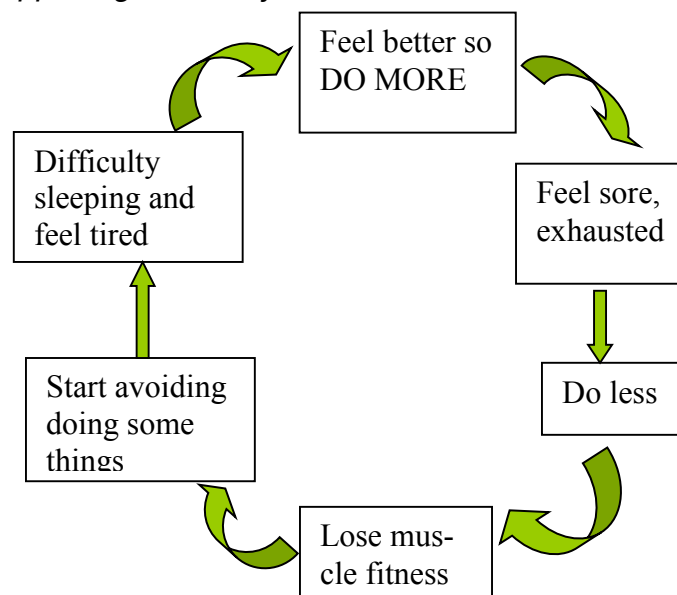
- Assertive Communication
- Mindful acceptance

6.2 Overview of today

- When our symptoms get in the way of us doing what we really want to do.
- Reviewing the group
- Preparing for relapse and setbacks
- Questionnaires

6.3 Pacing

*Sometimes it can feel as though our pain or health symptoms are very unpredictable and gets in the way of us living our values. Maybe you feel better on some days, and feel like you can do the things that are important to you, but then when you do, you feel floored afterwards, maybe for days, and then miss out on things that are even more important to you. You maybe feel as though you really pay for the times when you do manage to do things. It can be hard to understand why this is happening. One way to think of it is...*



*Can anyone relate to this? Does it look familiar at all? Maybe you sometimes do a bit more when you're having a good day, and this can feel really good, but sometimes this can lead to doing so much that you're floored by what you do, maybe for days, and as a result you get into this cycle and can't manage to do the things that are really important to you. And maybe when that happens, you find that you miss out on doing the kind of things that are really important to you. What kind of benefits are there from being in this cycle? What about costs? What does your experience tell you?*

*An alternative approach is to pace activities. Pacing is trying to keep doing the things you want to do, but taking regular breaks to avoid overdoing things. Its trying to pause and rest before our symptoms kick in and stop us being able to do more of what is important to us. Life is a marathon, not a sprint, and pacing is something that can be useful in helping us do more of the things that are important to us.*

*Imagine you have 9 things you want to get done (hold up 9 fingers) and you are having a good day so you blast along and get 5 of them done and find that night your symptoms are terrible and you find you can't manage anything for the next two days. Now go back in time, its that first day and you choose to do only three things and stop. The next day you are not flared up, so you do three that day too, and stop. Then on the third day you finish jobs 7, 8 and 9. After 3 days you have had your usual level of symptoms, and you have got all the things done you want to get done and not been floored by your symptoms.*

*What kind of ways has anyone here tried to pace in the past?*

Can also offer examples e.g. of pacing ironing, spreading this task over a week rather than doing it all in one day. Shopping – going a few times a week for small shops instead of one big one.

*When we talk about pacing, we're not talking about doing it to try to reduce, control or get rid of your symptoms. Rather, pacing can be used to do more of the things that are important to you with the symptoms that you have by taking control of behaviour, rather than letting behaviour be dictated by symptoms.*

#### 6.4 Reviewing the group

- a) primary vs secondary suffering
- b) thought suppression vs leaves on a stream / noticing: staying in the present moment
- c) thoughts over eyes vs holding them more lightly (reminder of specific defusion techniques e.g. labelling)
- d) getting in touch with values: knowing what they are and setting goals in line with them

- e) learning about what can get in the way of us living our values and some skills that can help us to do this (e.g. labelling thoughts, mindfulness, problem solving, assertiveness, pacing)
- f) making room for difficult thoughts, symptoms and emotions. Accepting them for what they are without getting caught up in the struggle to change them (reminder of specific defusion or mindfulness exercises).
- g) skills that can be helpful in living our values, such as communicating assertively, pacing ourselves and using problem solving strategies.

## 6.5 **Skills practice: Mindfulness**

Not guided as much. Could possibly ask participants to do a mindful walk during break.

## 6.6 **Preparing for setbacks – tool bag metaphor**

*So we have talked about a lot of skills that hopefully you find helpful in moving your life forward in the direction that you want to take it. However the path ahead isn't likely to be smooth. In fact, we can probably guarantee that there will be some pot holes ahead, and so we'd like to spend some time with you thinking about preparing for the pot holes and punctures that lie ahead of you.*

*Imagine that all the things that we've learned in the group are like tools that you've found helpful in living a more meaningful life with your health condition. And we have a great tool bag to store all of these tools in. Now you could take your tool bag and put it in your store cupboard at home, the one that's rammed full of stuff already, but you can just about squeeze one more thing in. And then you can get on with living your life. While you're doing that, what's happening to the tools? Maybe they're getting a bit rusty. Or maybe you're forgetting how you turn them on and operate them. You might find it hard to remember where on earth they actually are in that cupboard, and even if that's where you actually put them. So when you hit difficulties, as is likely to happen, what do you do? You maybe spend a lot of time looking for the toolkit in a panic, feeling like you're getting nowhere, before you give up. Or maybe you find the bag and try to use the tools, but can't quite remember how to use them.*

*What else could we maybe do with this toolkit that we've been working on over the last six weeks? Perhaps we could leave it lying on the living room coffee table. Or beside the kettle in the kitchen. Somewhere that would keep the bag in our sight and encourage us to keep checking on the tools. We could dip into the bag regularly and use the tools to make sure they're still working ok. That way, when things are difficult, everything's to hand and we don't have to spend lots of time and*

*energy finding the tools at a time when that feels a very difficult thing to do.*

*This is a bit like the road that lies ahead of you. You could choose to take some time off from doing the hard stuff that you've been learning in this group. But there are costs or risks to this. This treatment that you've been doing for the last six weeks isn't like other treatments where you attend the hospital for treatment, and then stop. Perhaps a better way to think of this approach is that it is ongoing, and might require you to keep tinkering at these techniques, keep dipping in to them and using them regularly, to help keep you on the path that you choose to be on.*

*Lets spend some time thinking about what sort of setbacks do you think you might encounter? (Brainstorm)*

*Often, setbacks happen at times when there are things that get in the way of us using the skills and techniques that you've been learning here. What kind of things have you faced in the past or that you think you might face that will make it difficult to use your skills? (Brainstorm again).*

*There's clearly a range of different things that could result in a setback, and so what you do when you're faced with this could be very different depending on your circumstances. It can be useful, though, to take some specific steps to get yourself back on track.*

**Step 1:** *Stop what you are doing and attend to the fact that a setback is occurring.*

**Step 2:** *Take a moment to gather your thoughts (perhaps by practicing some mindfulness).*

**Step 3:** *Review the situation leading up to the setback. Try asking yourself:*

- *Where were you when it started?*
- *What was going on in your immediate environment?*
- *Who was with you?*
- *Was there an identified trigger?*
- *Did you have any particular thoughts, symptoms, feelings or physical responses that were associated with the setback?*

**Step 4:** *Establish an immediate plan for action to allow your actions to remain in line with your personally chosen values and goals.*

*This might include taking a few minutes to go for a walk, being mindful, or calling a friend for support. The plan should be quick and easy to use in the moment that you are having a setback. (Ask for other ideas for possible useful plans). Having these kind of plans on hand and ready can help with riding out the setback.*

*You know what will help you best to do prepare for setbacks. Take some time to write some things down on a card that would be helpful for you to remember to draw on if you find yourself in a setback. These could be the kind of plans we've mentioned about, or different skills that you've learned. Whatever is most meaningful to you.*

After exercise, ask if anyone is willing to think of how they could carry this around with them, something they can draw on and use whenever they need to.

#### 6.7 Measures

Issue questionnaires for completion before participants leave.

#### 6.8 Wrap up and next steps

Discussion of where / when, and content for follow up sessions.

## Appendix 1: Introduction to Mindfulness

Find a comfortable place to sit with your back straight if it's comfortable to do that: we're trying to stay alert and aware during this exercise. If you're willing, you can close your eyes, or otherwise maybe focus on a spot on the wall.

Start by just bringing your awareness to the noises that you can hear in the room around you. [Pause] Notice where the noise is coming from. [pause] If a thought comes into your mind, notice the thought, and try to let it go, gently bringing your attention back to what you can hear in the room. [pause] You might find your mind trying to take your attention away from the noises in the room, maybe telling you that this is boring, that it won't help, or some other judgement. When it does this, just notice what your mind is saying, and gently bring your attention back to the room, noticing the noises that you can hear. [pause]. And when you're ready, open your eyes.

Ask for feedback on what people found happened. Would anyone like to share any thoughts that came up? What did they do when that happened? What was this like? Was there anything that kept coming up? Anything they found difficult?

OK, I'd like us to try this exercise again, this time bringing our awareness to our breath, if you're willing.

Find a comfortable position with your back straight if it's comfortable to do that, trying to stay alert and aware with your eyes closed or defocused. Normalise being distracted by thoughts and praise noticing (effort), rather than achieving.

For the next few breaths, try to notice the feeling of your breath, as your lungs empty and refill automatically [pause]. Try to observe it like you're a curious scientist who has never come across breathing before. [pause] Notice the air as it flows in through your nostrils and down into your lungs [pause]. Feel the warm air as it leaves your body, going up your throat and back out again [pause]. Notice how your body rises up when you breathe in ... your chest... your shoulders... your rib cage... your abdomen [pause]. And how it comes back down as your breath leaves your body [pause]. When thoughts come into your head, try to notice the thought and bring your attention gently back to your breath [pause]. Explore the feeling of your breath in your mouth... your nose... your throat... and as it goes down into your body [pause]. And when your mind naturally tries to take your attention on to something else - maybe with thoughts of when will this end, or what you need to do later, just gently acknowledge the thought, and return your attention and awareness back to exploring and noticing your breath [pause]. And when you're ready, open your eyes.

## Appendix 2: Leaves on a Stream

In this exercise, we are going to imagine sitting by a stream, and as thoughts come to our head, we'll try to see if we can let them go using the stream to help us. As always, start by finding a comfortable position and remember that we're trying to become more aware of the here and now in this exercise, a bit like we're trying to 'fall awake'.

When you're ready, take a few deep breaths to help you settle into this exercise. Let the air fill your lungs, your tummy expanding to make room for this, and then letting the air empty from your body.

And now imagine that you are sitting beside a stream that is flowing gently by you. Take a look around you and let your imagination fill in the details of the scene. Notice the stream, and perhaps some trees around you. Bring your awareness to some leaves that are floating down the stream.

For the next few minutes, we're going to focus our attention on the stream. And whenever a thought comes into your head, whatever it's about, we're going to notice the thought, place it on the leaf and let it float away down the stream. We're going to do this for all of your thoughts – pleasant and unpleasant – whatever comes up is ok.

Just keep watching the stream, and noticing what comes into your mind. And when you notice something, place it on a leaf and let it float away. We're not trying to get rid of these thoughts, rather just let them float on by us at their own speed. Some people find it helpful to have a kind, smiling facial expression when they're placing their thoughts on a leaf. Perhaps try this and see how it works for you.

You might get thoughts about being bored, or not doing this right. Just try to notice these thoughts if they come up, gently and kindly place them on a leaf and let them float away.

Sometimes you might get hooked into your thoughts before noticing what's happened. Don't worry if this happens, it's normal and often happens. When you notice that it's happened, just notice your thoughts, and gently put them on a leaf and let them float away.

No matter how many thoughts come up, try to just notice them, place them on a leaf and let them float away.

If a feeling comes up, maybe frustration or tiredness, simply notice it, saying "here's a feeling of frustration" or "here's a feeling of tiredness", and then place those words on a leaf and let them float away.



Whenever thoughts come up for you, try to just notice them, gently and kindly place them on a leaf and let them float away.

And when you're ready, try to bring your attention away from the stream and back to the room around you – noticing the sounds, the feeling of contact with the floor and the chair – and then open your eyes.

### **Appendix 3: List of Values**

Honour	Experience	Freedom	Flow
Wisdom	Learning	Curiosity	Structure
Integrity	Loyalty	Openness	Rhythm
Peace	Reliability	Perseverance	Excitement
Beauty	Order	Calm	Wit
Nesting	Respect	Wonder	Sustainability
Nurturance	Thoughtfulness	Humour	Self sufficiency
Balance	Patience	Organisation	Independence
Faith	Tolerance	Stability	Leadership
Spirituality	Serenity	Security	Kindness
Love	Attentiveness	Meaning	Expansiveness
Strength	Equality	Understanding	Simplicity
Communication	Caring	Intelligence	Conservation
Self expression	Intimacy	Adventure	Spontaneity
Imagination	Sensuality	Risk	Comfort
Creativity	Play	Courage	Warmth
Forgiveness	Fun	Power	Discipline
Intuition	Effort	Connected- ness	Justice
Compassion	Productivity	Citizenship	Detachment
Diversity	Health	Belonging	

#### **Appendix 4: Values Identification at 80<sup>th</sup> Birthday Party**

Let's try an exercise to help us get in touch with our values.

For this exercise, we will be imagining looking back on a life we'd lead exactly the way we would have like – the 'ideal' life – not the life you are leading just now.

We're going to imagine having our 80<sup>th</sup> birthday party. But this is a bit of an unusual party - anyone can be at the party e.g. those who have died or who may have died, or those who have not been born yet.

Two or three people are going to give a speech at the party about what you mean to them, what you've stood for in life, what role you've played in their life. While your imagining this, people often find that their mind suggests things like "that person wouldn't really say that", or something similar – try to notice when thoughts like this come into your mind and gently bring your attention back to the exercise.

So, we're going to start with mindful breathing, and then go on to imagine your 80<sup>th</sup> birthday party. When you're ready, find a comfortable position with your feet firmly on the floor and close your eyes. For the next few breaths, notice the air as it fills your lungs, and how they automatically empty with no effort from you. Bring your awareness to the sensation of the air coming into your body and observing it as it leaves again.

Imagine you have arrived at your 80<sup>th</sup> birthday party. Look around you at where you are. You might be in a room at home, somewhere you are comfortable, or perhaps in a big function room somewhere. Look round the room taking in the guests that are there at the party.

Imagine that one of your guests stands to give a speech about what you have meant to them and what you've stood for in your life. Remember that this is about your ideal life, one that you've lived that way you have wanted to. If thoughts come into your mind about how the party wouldn't really be like this (e.g. would never say these things), notice these thoughts and gently bring your attention back to what the person is saying.

Imagine a second guest standing to give a speech about what you have meant to them and what you've stood for in your life. Remember that this is about your ideal life, one that you've lived that way you have wanted to. Again, when thoughts come into your mind, maybe about it not being. Remember that if get thoughts about how the party wouldn't really be like this (e.g. would never say these things), notice these thoughts and gently bring your attention back to what the person is saying.

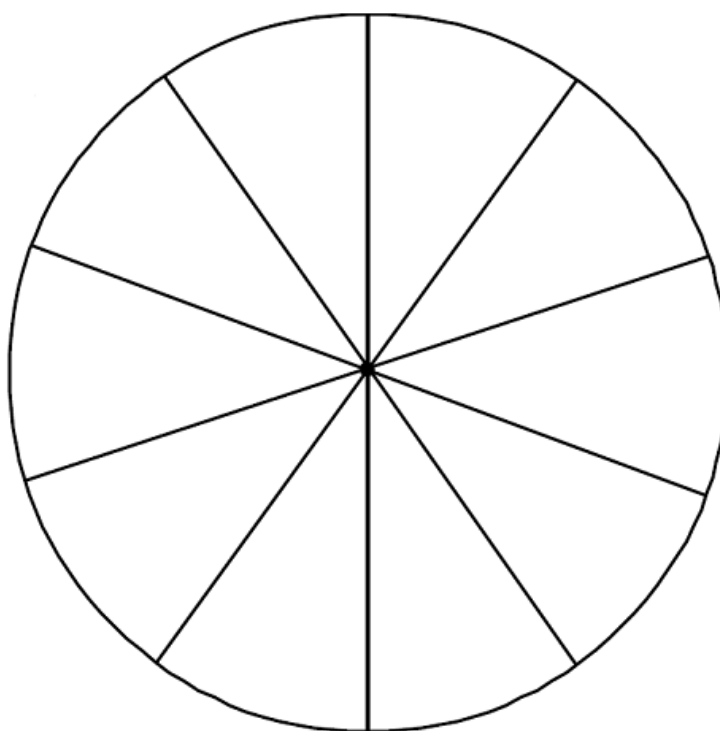
Imagine a third guest standing to give a speech about what you have meant to them and what you've stood for in your life. Remember that this is about your ideal life, one that you've lived that way you have wanted to.

Remind that if get thoughts about how the party wouldn't really be like this (e.g. would never say these things), notice these thoughts and gently bring your attention back to what the person is saying.

### Appendix 5: Values Circle Exercise

<i>Family</i>	<i>Friends</i>	<i>Partner</i>
<i>Work</i>	<i>Self care</i>	<i>Personal growth and development</i>

Write one of each of your values beside each section of a life domain wheel.



Shade in each section the amount that you feel that you are showing that value in that life domain – **for example:**

- If *courage* was one of my values and I was working on the life domain of *family*, I wouldn't shade in very much of it at all if I let my fears stop me from speaking up to my partner.
- If *caring* was another value and I was proud of how I showed my caring in the relationship, I would shade that in entirely.
- If *strength* was another value, and I was resentful because I felt like I was the only one with strength in the relationship, I might shade in space beyond the circle.

**Appendix 6: Values and Goals Worksheet**

Value	Long term goal	Medium term goal	Short term goal	Immediate goal

## **Appendix 7: Mindfulness body scan skill practice**

We'd like to try something that helps us to connect to the here and now and become more aware of our thoughts. This is a skill that we're going to come back to throughout the group, and can be really helpful for people living with pain or illness. Remember though that changing our bodies is not our goal here; awareness of our bodies is what we are aiming for. So if you're willing to give this a try:-

Find a comfortable with your back straight if it's comfortable to do that: we're trying to stay alert and aware during this exercise, rather than trying to get into a deeply relaxed state. If you're willing, you can close your eyes, or otherwise maybe focus on a spot on the wall.

Start by just bringing your awareness to the movement of your breath and how that feels in your body. When you're ready, notice how your body feels where it comes into contact with the bed or the chair. As you breathe out, let yourself sink a little deeper into the chair or floor.

Try to just notice the sensations in your body, without trying to change them. We're going to spend some time noticing sensations around our body, and while we're doing, try to remember that our intention is to be aware of our experience, and not to try to change that experience.

So when you're ready, bring your attention to your stomach, and the feelings that you have there. Notice how it moves as your breath enters and leaves your body. Observe the sensations your experience as your stomach rises with each in-breath, and falls with each out-breath.

And now, on an out-breath, start to bring your attention to your left leg, starting at your foot. Focus on your toes, exploring the sensations you have there, maybe noticing the contact between your toes, or the feeling of them in touch with the floor. Notice how warm or cold they feel, maybe they're tingling, maybe they have no feelings at all. Whatever you are noticing is fine, we're just trying to be with your body as it is right now, without trying to change it. Bring your attention to your foot and ankle and heel now, and notice the sensations there – any warmth or coolness or pressure. And when you're ready bring your attention to your lower leg and knee, exploring how that part of your body feels, noticing the sensations there. And now move up to your upper leg and up to your hips, focussing on how that area feels.

And when you're ready, on an in-breath, imagine your breath coming into your body and moving all the way down through your lungs, through your stomach and down into your leg until it reaches the toes of your left leg. And as you breathe out, imagine the breath leaving your body, coming back up from your toes, up your leg, through your stomach and lungs and

out of your mouth or nose. There's no right or wrong way to do this, just try it out, noticing how it feels and seeing what happens.

And now, on an out-breath, start to bring your attention to your right leg, starting at your foot. Focus on your toes, exploring the sensations you have there, maybe noticing the contact between your toes, or the feeling of them in touch with the floor. Notice how warm or cold they feel, maybe they're tingling, maybe they have no feelings at all. Whatever you are noticing is fine, we're just trying to be with your body as it is right now, without trying to change it. Bring your attention to your foot and ankle and heel now, and notice the sensations there – any warmth or coolness or pressure. And when you're ready bring your attention to your lower right leg and knee, exploring how that part of your body feels, noticing the sensations there. And now move up to your upper leg and up to your hips, focussing on how that area feels.

And when you're ready, on an in-breath, imagine your breath coming into your body and moving all the way down through your lungs, through your stomach and down into your leg until it reaches the toes of your right leg. And as you breathe out, imagine the breath leaving your body, coming back up from your toes, up your leg, through your stomach and lungs and out of your mouth or nose. There's no right or wrong way to do this, just try it out, noticing how it feels and seeing what happens.

And when you're ready, on an out-breath, start to bring your attention to your left arm, starting at your hand. Focus on your toes, exploring the sensations you have there, maybe noticing the contact between your toes, or the feeling of them in touch with the floor. Notice how warm or cold they feel, maybe they're tingling, maybe they have no feelings at all. Whatever you are noticing is fine, we're just trying to be with your body as it is right now, without trying to change it. Bring your attention to your foot and ankle and heel now, and notice the sensations there – any warmth or coolness or pressure. And when you're ready bring your attention to your lower leg and knee, exploring how that part of your body feels, noticing the sensations there. And now move up to your upper leg and up to your hips, focussing on how that area feels.

And when you're ready, on an in-breath, imagine your breath coming into your body and moving all the way down through your lungs, through your stomach and down into your leg until it reaches the toes of your left leg. And as you breathe out, imagine the breath leaving your body, coming back up from your toes, up your leg, through your stomach and lungs and out of your mouth or nose. There's no right or wrong way to do this, just try it out, noticing how it feels and seeing what happens.

Repeat for remainder of body



Include bits about thoughts coming into our head, and noticing when that happens and gently trying to bring our attention back to observing our bodies. Normalise this.

After you have scanned your body, see if you can get a sense of the body as a whole, with your breath flowing in and out of your body freely.

And when you're ready, gently bring your attention back to the room around you, start to wiggle your toes and fingers, and open your eyes gently.

*Note: this exercise can also be used to focus on a part of the body that has pain as a defusion exercise.*

## **Appendix 8: Mindful Acceptance**

I invite you to sit upright in your chair with your back straight and your feet flat on the floor. Most people find they feel more alert and awake sitting this way, so check it out and see if this is the case for you. And either close your eyes or fix them on a spot, whichever you prefer. And take a few slow deep breaths, and really notice the breath flowing in and out of your lungs. (10). Now scan your body from head to toe, starting at your scalp and moving downward. And notice the sensations you can feel in your head... throat... neck... shoulders... chest... abdomen... arms... hands... legs... and feet. Now zoom in on the part of your body where you're feeling this feeling most intensely. And observe the feeling closely, as if you're a curious scientist who has never encountered anything like this before. (5). Observe the sensation carefully... let your thoughts come and go like passing cars, and keep your attention on the feeling... notice where it starts and where it stops... learn as much about it as you can... if you drew an outline around it, what shape would it have... is it on the surface of the body or inside you, or both? How far inside you does it go?... where is it most intense?... where is it weakest? (5) if you drift off into your thoughts, as soon as you realise it, come back and focus on the sensation... observe it with curiosity... how is it different in the centre than around the edges? Is there any pulsation or vibration within it? Is it light or heavy? Moving or still? What is its temperature? ... are there hot spots or cold spots?... notice the different elements within it... notice that it's not just one sensation – there are sensations within sensations... notice the different layers (5)

### **BREATHE**

As you're observing this feeling, breathe into it... imagine your breath flowing into and around this feeling... breathing into and around it...

### **EXPAND**

And as you're breathing into it, it's as if, in some magical way, all this space opens up inside you... you open up around this feeling... make space for it... expand around it... however you make sense of that... breathing into it and opening up around it...

### **ALLOW**

And see if you can just allow this feeling to be there. You don't have to like it or want it... just allow it... just let it be... observe it, breathe into it, open up around it, and allow it to be as it is (10). You may feel a strong urge to fight with it or push it away. If so just acknowledge the urge is there without acting on it. And continue observing the sensation (5). Don't try to get rid of it or alter it. If it changes by itself, that's ok. If it doesn't change, that's ok too. Changing or getting rid of it is not the goal. Your aim is simply to allow it... to let it be (5)

### **OBJECTIFY**

Imagine this feeling is an object... as an object, what shape does it have?... is it liquid, solid, gas?... is it moving or still?... what colour is it?... transparent or opaque?... if you could touch the surface, what would it feel like?... wet or dry?... rough or smooth?... hot or cold?,,, soft or hard?... (10) observe this object curiously, breathe into it and open up around it... you don't have to like it or want it. Just allow it... and notice that you are bigger than this object... no matter how big it gets, it can never get bigger than you (10)

#### NORMALIZE

This feeling tells you some valuable information.. it tells you that you're a normal human being with a heart... it tells you that you care... that there are things in life that matter to you... and this is what humans feel when there's a gap between what we want and what we've got... the bigger the gap, the bigger the feeling (5).

#### SHOW SELF-COMPASSION

Take one of your hands and place it on this part of your body... imagine that this is a healing hand... the hand of a loving friend or parent or nurse... and feel the warmth flowing from your hand into your body... not to get rid of the feeling but to make room for it... to soften up and loosen up around it... (10). Hold it gently as if its a crying baby or a frightened puppy. (10). And letting your hand fall, once again breathe into the feeling and expand around it. (10)

#### EXPAND AWARENESS

Life is like a stage show... and on that stage are all your thoughts, and all your feelings, and everything that you can see, hear, touch, taste, and smell... and for the last few minutes, we dimmed the lights on that stage and we shined a spotlight on this feeling... and now its time to bring up the rest of the lights... so bring up the lights on your body... notice your arms and legs, and head and neck... and notice that you're in control of your arms and legs, regardless of what you're feeling... just move them around a little to check that out for yourself... and now take a stretch, and notice yourself stretching... and bring up the lights on the room around you... open your eyes, look around, and notice what you can see... and notice what you can hear... and notice that there's not just a feeling here... there's a feeling inside a body, inside a room, inside a world full of opportunity... and welcome back!

## **References**

ACT for Life (Oliver, J., Morris, E., Johns, L. and Byrne, M., 2011). South London and Maudsley NHS Foundation Trust, London, UK.

Ferreira, N. & Gillanders, D. (2012). Better living with IBS. Wollombi. Exile publishing

Vowles, K. and Sorrell, J.T. (2007). Living with Chronic Pain. University of Bath, UK.

Walser, R. and Westrup, D. (2007). Acceptance and Commitment Therapy for Post-Traumatic Stress Disorder and Trauma-related Problems. New Harbinger.

Matthew McKay <http://cbt-self-help-therapy.com/mind-and-emotion/values-into-action/4-11-action-plan/> accessed on 8<sup>th</sup> May 2012, and ACT for Life: Group Intervention for Psychosis Manual by Oliver, Morris, Johns and Byrne (Dec 2011).

## Appendix 4 Ethical Approval

*EoSRES*



### East of Scotland Research Ethics Service (EoSRES)

Tayside Medical Sciences Centre (TASC)  
Residency Block C, Level 3  
Ninewells Hospital & Medical School  
George Pirie Way  
Dundee DD19SY

Linsay Brassington  
Trainee Clinical Psychologist  
NHS Fife  
Department of Psychology  
Stratheden  
Cupar

Date: 26 June 2012  
Your Ref:  
Our Ref: CYA/AG/12/GA/086  
Enquiries to: Mrs Caroline Ackland  
Extension: Ninewells extension: 32589  
Direct Line: 01382 632589  
Email: Caroline.ackland@nhs.net

Dear Linsay

**Re: An Acceptance and Commitment Therapy (ACT) Group intervention for individuals with long term conditions.**

You have sought advice from the Research Ethics Office on the above project. I have considered this and can advise that this does not require ethical review under the terms of the Governance Arrangement for Research Ethics Committees (GAFREC) in the UK. The advice is based on the following documentation provided:

Document	Version	Date
Email	N/A	21 June 2012
Protocol	Not Specified	Not Specified
Participant Information Sheet	Not Specified	Not Specified
Consent Form	Version 1	2 <sup>nd</sup> March 2012
Questionnaire- AAQ-II	Not Specified	Not Specified
Questionnaire- you views	Not Specified	Not Specified

- You are undertaking a service evaluation
- You may still require Research and Development approval

*Please note that this advice is issued on behalf of the Research Ethics Service Office and does not constitute an opinion of a Research Ethics Committee (REC). It is intended to satisfy journal editors and conference organisers, who may require evidence of consideration of the need for ethical review prior to publication or presentation of your results.*

You should keep a copy of this letter within your project file.

Yours sincerely,

**Caroline Ackland**  
Scientific Officer, East of Scotland Research Ethics Service

Cc: Mrs Aileen Yell, Research Governance Manager, NHS Fife



## Appendix 5 Participant Consent Form



NHS Fife Department of  
Clinical Psychology  
Lynebank Hospital  
Halbeath Road  
Dunfermline  
KY11 4UW



Patient Identification Number

### CONSENT FORM

Title of Project: Evaluation of Better Living with Illness group  
Name of Evaluator: Linsay Brassington

#### Please tick

1. I confirm that I have read and understood the information sheet dated 2nd March 2012 (version 1) for the above evaluation. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my participation in the evaluation is voluntary and that I am free to withdraw at any time without giving any reason, and without my medical care or legal rights being affected. I understand that I can still participate in the group regardless of my participation in this evaluation. ☐
3. I understand that relevant anonymised data collected during the evaluation may be shared with supervisors from the School of Health in Social Sciences at the university of Edinburgh or individuals from NHS Fife. I give permission for these individuals to view my data. I understand that this data will not identify me as an individual. ☐
4. I agree to take part in the above evaluation ☐
5. I would like to be sent information about the findings of the evaluation ☐
6. I agree to be contacted up to 3 years after the group as part of the evaluation of the long term benefits of the group ☐
7. I understand that the findings of this evaluation will form part of an academic project for the University of Edinburgh Doctorate of Clinical Psychology training course, and may be published. I understand that I will not be identified as an individual in such a publication. ☐
8. I agree for comments that I provide anonymously on feedback forms to be used in the evaluation report and any publications that may arise from it. ☐

Name of participant \_\_\_\_\_ Date \_\_\_\_\_ Signature \_\_\_\_\_  
Person taking consent \_\_\_\_\_ Date \_\_\_\_\_ Signature \_\_\_\_\_

# Appendix 6 Assessment Proforma

## BETTER LIVING WITH ILLNESS ASSESSMENT SUM-

Clinical Health Psychology Service

NHS Fife Department of Psychology  
Stratheden Hospital  
Cupar  
Fife KY15 5RR  
Tel + Answer phone 01334 696336  
Fax 01334 655380

**Private and Confidential**

**MARY**

Dr  
Fife

Date: 24 August 2015  
Your Ref:  
Our Ref: S  
Enquiries to: Linsay Brassington  
Email: Linsay.Brassing-  
ton@nhs.net

**Re:** \_\_\_\_\_ **(CHI: \_\_\_\_\_)**

Thank you for referring [Insert patient name] to the Clinical Health Psychology service. They have recently been assessed to determine whether they would be suitable for the Better Living with Illness group intervention. This group aims to help people living with long term conditions to cope with some of the difficulties that they face. The assessment is summarised below.

<b>Date Referred:</b>	<b>Referrer:</b>
<b>Assessment date:</b> / /2013	

### Presenting problems

**Health:**

**Psychological:**

**Social:**

**Assessment Outcome:**

**Comments/Future Recommendations:**

Linsay Brassington  
Trainee Clinical Psychologist

Pam Lanza  
Health Psychologist

Patient ID \_\_\_\_\_

***Group suitability criteria***

**Inclusion**

Group explained ☐      Fluent English speaker ☐      Age 18 + ☐

Individual agrees to the rehabilitative focus of group ☐      Individual agrees to a group approach ☐      Minimum of 3 months living with condition ☐

**Exclusion**

Significant psychiatric difficulties ☐      Significant risk of harm (inc alcohol, drugs, suicide) ☐      Personality not conducive to group work ☐

Cognitive impairment ☐      Language / hearing / communication difficulties ☐      Tailored intervention required ☐

Participating in other psychological therapy ☐

Date preferences / difficulties	
Location preferences	



Patient ID \_\_\_\_\_

**Demographic Information**

Ethnic origin \_\_\_\_\_

Employment status (e.g. Full time / part time / unemployed / retired) \_\_\_\_\_

Age

Marital status

Gender

Time since onset of symptoms

Time since diagnosis

Please indicate which treatments you are currently receiving and which you have tried in the past. Please also rate how helpful you have found each treatment.

Treatment	Tick if currently receiving	Tick if previously received	How much have you and your symptoms benefited from this treatment? Please tick				
			Not at all	A little	Some what	Quite a bit	A great deal
Medication							
Psychological therapy (group)							
Physiotherapy							
TENS							
Homeopathy							
Implant devices							
Psychological therapy (1:1)							
Surgery							
Occupational therapy							
Accupuncture							
Electro therapy							

## Appendix 7 Participant Information Sheet



### Evaluation of Better Living with Illness Group



You are being invited to take part in the evaluation of a group for people living with long-term health conditions. Before you decide if you would like to take part, please read this information very carefully. It tells you all about the evaluation. This evaluation is being conducted as part of an academic qualification (Doctorate in Clinical Psychology).

#### **What is the purpose of the evaluation?**

The evaluation aims to look at the outcomes of the group that you are participating in - the Better Living with Illness group. We ask you to complete measures anyway as part of your usual care. The evaluation hopes to use these same measures to look at how the group is benefitting patients as a whole. The evaluation will use the measures from the group and other Better Living with Illness groups to look at how people have benefitted from the groups.

#### **Why have I been invited?**

You have been identified because you'll be taking part in the group. Everyone taking part in the group will be invited to take part in the evaluation.

#### **What will happen to me if I take part?**

All participants in the group, including those that do not wish to participate in this evaluation, will be asked to complete questionnaires at the assessment appointment, at the first and last session of the group and at the final follow up session. With your permission, we will also contact you within 3 years of the group ending to complete the same questionnaires and help us understand if there are long term benefits from participating in the group. If you consent to be part of the evaluation, your questionnaires will be used to help us understand whether the group was helpful and which parts of the group are important in making it helpful.

#### **What happens if I don't want to carry on with the evaluation?**

You can leave the evaluation at any time without giving a reason, and this will have no effect on any other care or treatment you are receiving. You can also continue to attend the group. Information already collected would be retained and used in the evaluation. No further data would be used.

**What if I have questions or concerns?**

If you have a concern about any aspect of the group or its evaluation, you should speak to the evaluator who will do their best to answer your questions (Tel: 01334 696 336 or write to Linsay Brassington, Clinical Psychology Dept, Lynebank Hospital, Dunfermline KY11 4UW).

**Will my taking part in this evaluation be kept confidential?**

All information which is collected during the course of the evaluation will be kept strictly confidential and any information which could identify you will be replaced with a participant information number to anonymise it. This data will be accessed by facilitators of the group as part of your usual care and used by the principal evaluator (Linsay Brassington, Trainee Clinical Psychologist) and her supervisors as part of this evaluation. The data reported and presented to others will be anonymised so no-one could identify you or link you to your responses. The completed questionnaires and consent forms will be kept in your confidential patient file as part of your usual care.

**What will happen to the results of the evaluation?**

All identifiable data collected will be stored securely and anonymised before being used for the evaluation. The anonymised results of the evaluation will be written up as part of an academic project and submitted as part of the University of Edinburgh Doctorate of Clinical Psychology training course requirements. It may also be published in an academic journal. You will not be identified in any report or publication.

**Who is organising and funding the evaluation?**

This evaluation is a Doctorate of Clinical Psychology student project organised by the University of Edinburgh and NHS Fife.

**If you have a complaint**

If at any time you wish to make a complaint about any aspect of the evaluation, please contact NHS Fife Headquarters, Hayfield House, Hayfield Road, Kirkcaldy, Fife KY2 5AH, and follow the standard NHS complaints procedure. Alternatively, you can contact Dr Jackie Fearn, Clinical Psychology Dept, Stratheden Hospital, Cupar, Fife KY15 5RR or telephone 01334 696 336.

**Further information**

If you have any questions or concerns regarding the evaluation, please contact Linsay Brassington, Trainee Clinical Psychologist by phone on (01334) 696 336 or write to Ms Linsay Brassington, Clinical Psychology Dept, Lynebank Hospital, Dunfermline KY11 4UW. If you would prefer to speak to someone independent of the group and its evaluation, please contact Miss Tara Graham, Research and Development Psychologist by phone on (01334) 696218 or write to Miss Tara Graham, Clinical Psychology Department, Stratheden Hospital, Cupar, Fife KY15 5RR.

Thank you